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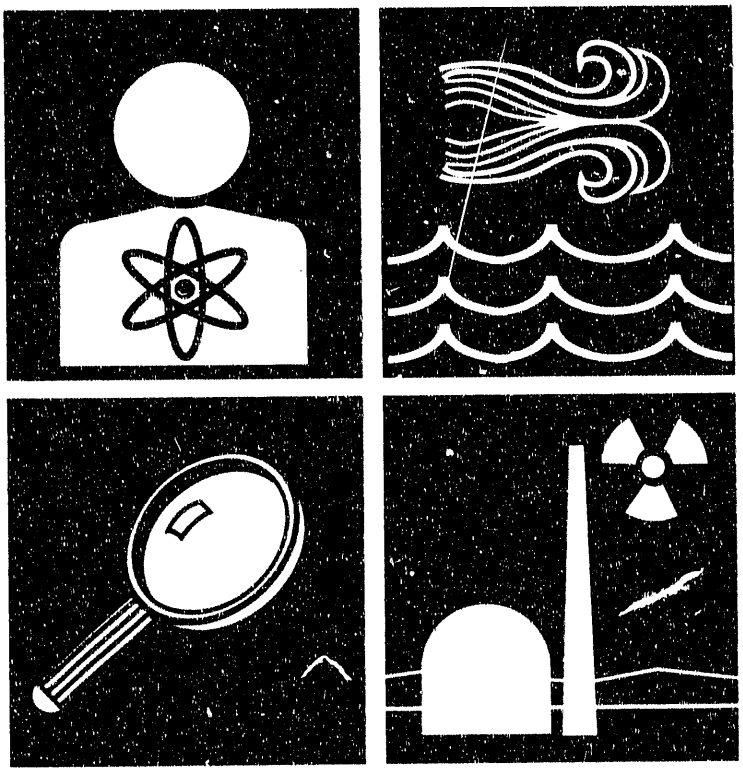
PNWD-1980-02 HEDR
UC-707

Hanford Environmental Dose Reconstruction Project

Monthly Report

July 1992



Prepared for the Technical Steering Panel
and the Centers for Disease Control
under Contract Number 18620 (BNW)/200-92-0503 (CDC)

Battelle
Pacific Northwest Laboratories

PNWD-1980-02 HEDR

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PNWD--1980-02-HEDR

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HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT

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Prepared for the Technical Steering Panel
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under Contract Number 18620

Battelle
Pacific Northwest Laboratories
Richland, Washington 99352

HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT

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Preface

This monthly report summarizes the technical progress and project status for the Hanford Environmental Dose Reconstruction (HEDR) Project being conducted by Battelle Pacific Northwest Laboratories (BNW) under contract with the Centers for Disease Control (CDC). The Technical Steering Panel (TSP), which is composed of experts in numerous technical fields related to the project, provides technical direction of the project and represents the interest of the public.

Figure 1 shows the Battelle organizational structure of the HEDR Project. Table 1 shows the status of Battelle work to comply with directives issued by the TSP.

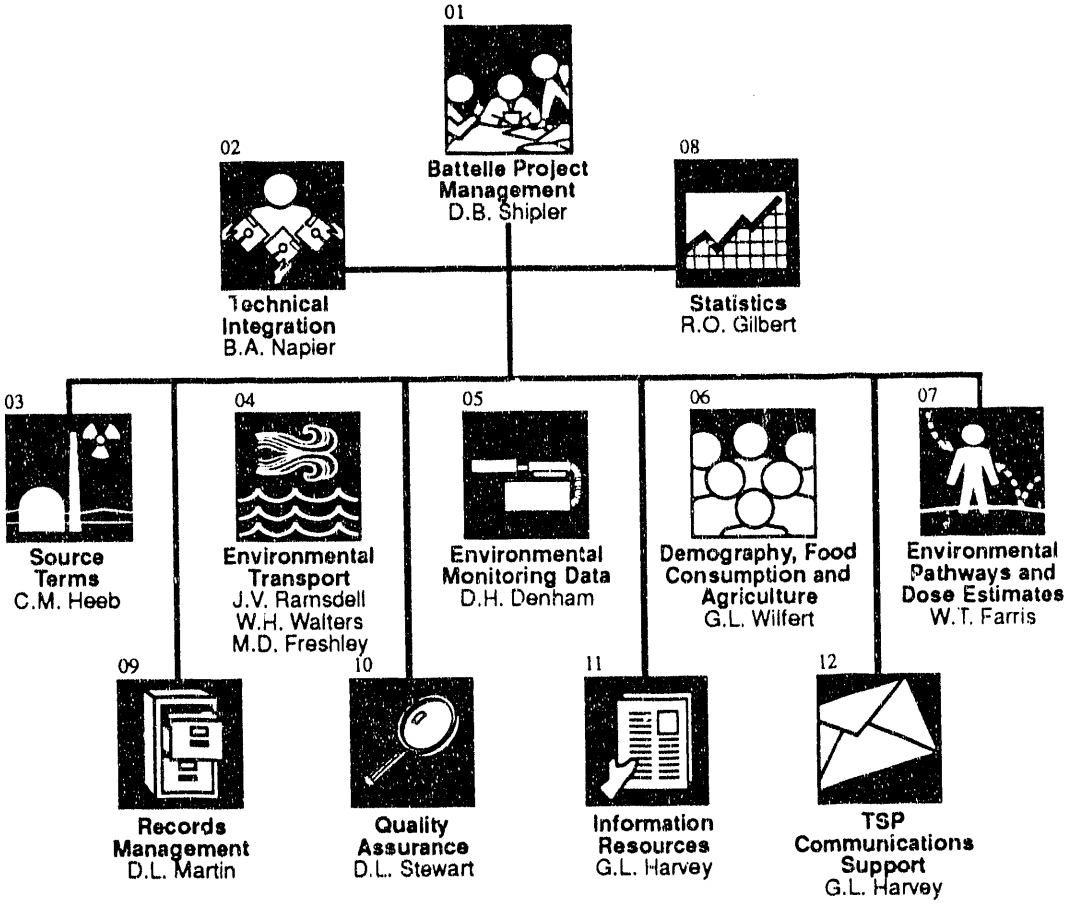


Figure 1. Organizational Structure of the HEDR Project

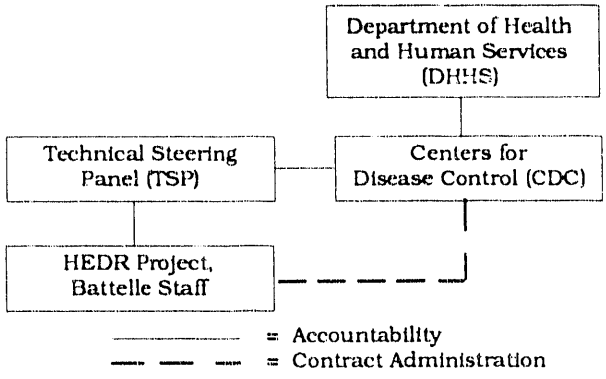
Table 1. Status of Directives[a]

		Complete	Ongoing
88-1	(a) Proposals		x
	(b) Source Terms		x
88-2	Vegetation		x
88-3	Status Reports		x
88-4	Ground Water		x
88-5	Maps	x	
88-6	Resumes	x	
89-1	Indian Tribes		x
89-2	Bioassay Data	x	
89-3	Document Handling		x
89-4	Reactor Purging		x
89-5	Phased Approach	x (modified 2/14/91)	
89-6	Meeting Materials		x
89-7	Tech Communication		x
89-8	Phase II Planning	x (modified 2/14/91)	
89-9	Project QA Plan		x
89-10	Contracts with Tribes		x (revised annually)
90-1	Project Direction (Task Plans)		x
90-2	Dose Cut-Off Limit	x	
92-1	Demography, Food, and Agriculture Tasks		x

(a) Note: For simplicity, TSP directives are identified here using only key words. The complete directives are available from the TSP.

Executive Summary

The objective of the Hanford Environmental Dose Reconstruction (HEDR) Project is to estimate the radiation doses that individuals and populations could have received from nuclear operations at Hanford since 1944. The project is being managed and conducted by the Battelle Pacific Northwest Laboratories (BNW) under contract with the Centers for Disease Control (CDC). The independent Technical Steering Panel (TSP) provides technical direction.



The TSP consists of experts in environmental pathways, epidemiology, surface-water transport, ground-water transport, statistics, demography, agriculture, meteorology, nuclear engineering, radiation dosimetry, and cultural anthropology. Included are appointed technical members representing the states of Oregon, Washington, and Idaho, a representative of Native American tribes, and an individual representing the public.

The project is divided into the following technical tasks. These tasks correspond to the path radionuclides followed from release to impact on humans (dose estimates):

- Source Terms
- Environmental Transport
- Environmental Monitoring Data
- Demography, Food Consumption, and Agriculture
- Environmental Pathways and Dose Estimates.

The Source Terms Task develops estimates of radioactive emissions from Hanford facilities since 1944. These estimates are based on historical measurements and production information.

The Environmental Transport Task reconstructs the movement of radioactive materials from the areas of release to populations. Movement via the atmosphere, surface water (Columbia River), and ground water is studied.

The Environmental Monitoring Data Task assembles, evaluates, and reports historical environmental monitoring data.

The Demography, Food Consumption, and Agriculture Task develops the data needed to identify the populations that could have been affected by the releases. Population and demographic information are developed for the general population within the study area. This information is also expected to be developed for several special population groups, including Native American tribes in the study area.

In addition to population and demographic data, the food and water sources and consumption patterns for populations are estimated because they provide a primary pathway for the intake of radionuclides. Historical dairy farming practices and milk distribution systems are studied because milk is a significant pathway for iodine-131 to enter the human body. Cows could have eaten vegetation contaminated with this radionuclide.

Lifestyle and food habit information will be developed by Battelle for the Fred Hutchinson Cancer Research Center to be used in the Hanford Thyroid Disease Study (HTDS).

The Environmental Pathways and Dose Estimates Task uses the information produced by the other tasks to estimate the radiation doses individuals could have received from Hanford radiation.

Project reports and Hanford-originated references used in the reports are made available to the public in a public reading room. Project progress is documented in this monthly report, which is available to the public.

Project Summary

Progress

Figure A.1 in Appendix A shows the status of FY 1992 project milestone activities. The following is a summary of activities conducted by HEDR staff in July 1992:

- resolved FY 1992 funding and contract questions. 1) No additional funds will be provided by the U.S. Department of Energy (DOE) or CDC for FY 1992. 2) No additional funds can be transferred from other programs to HEDR. 3) DOE-Headquarters (HQ) cannot guarantee carryover of unspent FY 1992 funds into FY 1993. Battelle funds through the CDC contract can be carried over. 4) CDC cannot place Native American contracts by October 1, 1992. Battelle will be asked to extend the existing subcontracts through December 31, 1992. Funds for this period will be transferred from the CDC FY 1993 allocation for HEDR to DOE for distribution to the Native American tribes. 5) Battelle was asked to continue to support the tribes by assisting them to develop scopes of work and prepare their proposed statements of work for the next round of work orders. 6) TSP subcontracts beyond September 30, 1992 will be managed by the State of Washington for CDC.
- presented results and distributed Volume 1 of the *Recommendations to the Technical Steering Panel Regarding Approach for Estimating Individual Radiation Doses Resulting from Releases of Radionuclides to the Columbia River* report (PNWD-1977 HEDR) (Milestone 0204B) at the Astoria, Oregon, TSP meeting July 17
- issued *HEDR Modeling Approach* (PNWD-1983 HEDR)
- issued a letter report, *Radioactive Contamination of Fish, Shellfish, and Waterfowl Exposed to Hanford Effluents: Annual Summaries, 1945-1972* (PNWD-1986 HEDR)
- sent the report, *Uncertainty and Sensitivity Analysis of Historical Measurements of Iodine-131 for Vegetation in 1945-1947*, to CDC and the TSP for review and comment. Presented a summary of it at the TSP meeting in Astoria, Oregon, on July 17.
- completed *Media Information Review, January - June 1992* (PNWD-1992 HEDR) (Milestone 1203C)
- provided input to a decision by the Native American Working Group to develop a standard protocol for tribes to complete their remaining data collection and analysis
- provided assistance to the Confederated Tribes of the Umatilla Indian Reservation to aid in their data reduction and entry task
- declassified 359 Hanford-Site-originated documents, 85 of which are of potential interest/use to the project
- completed all TSP/public requested declassifications of Hanford historical documents generated from 1944-1960

Major Problems or Changes and Action Taken

An amendment agreed to with the CDC covering the unfunded DOE work for FY 1992 is not acceptable to DOE. There are no more FY 1992 or 1993 funds and no other funds can be transferred. The result is that several reports scheduled for FY 1992 cannot be published until FY 1993.

Because of work behind schedule and implementation problems, a stop-work order was issued for Subtask 0702, Environmental Accumulation and Dose Code Development. BNW line management and HEDR staff are developing a recovery plan for the Subtask 0702 DESCARTES and CIDER codes. The plan is expected to be presented to the TSP in October and implemented immediately thereafter. The codes will be corrected, redesigned and coded to meet all criteria. The documentation reports will be delivered behind schedule.

Testing necessary to develop the sensitivity/uncertainty plan is proceeding several months behind schedule. The recovery plan is expected to meet the HTDS and other dose calculation schedules for mid-FY1993.

Work on negotiating and signing a Task 06 (Demography, Food Consumption and Agriculture) contract with Washington State University Social and Economic Sciences Research Center (WSU/SESRC) for support work is on hold until funding questions have been resolved. Funding for Task 06 is currently under discussion at the Project Office and TSP level.

Battelle technical and contract support to the Native American tribes is now on hold pending decisions by the TSP and CDC to reallocate available project funds to supplement shortfalls in project funding..

Planned Work for the Next Three Months

- update and issue revised Project Management Plan (Milestone 0101F)
- issue Volume 2 of river recommendations report (Milestone 0204B)
- complete and issue key radionuclides/pathways report (Milestone 0205B)
- complete the report on the documented Phase I Iodine-131 releases (Milestone 0302A)
- publish final TSP-approved version of the groundwater report (Milestone 0403A)
- publish final TSP-approved version of the Columbia River pathway summary report (Milestone 0404A)
- complete the letter report, Assessment of Fruit and Vegetable Pathways, 1944-1957 (Milestone 0603C)
- complete the letter report, Iodine-131 Parameters and Dose Factors (Milestone 0703B), combined with Milestone 0205D, Model Parameter Distributions Strategy
- complete the letter report, Declassified, Prioritized Document List (Milestone 1102A)
- complete the letter report, Status of Document Search and Data Quality Objective (DQO) Efforts (Milestone 1103A)
- issue a task plan that covers work funded in the CDC 2-year contract with Battelle. This task plan will combine the individual fiscal year task plans into one task plan.
- negotiate budget adjustments with the TSP and CDC to perform critical work that is currently not funded
- issue Hanford scenario to Validation of Model Predictions (VAMP)
- complete the numerical verification of the RATCHET (atmospheric transport) code

Budget Status

Figure 2 shows the budget status of the HEDR Project. Table A.1 in Appendix A shows FY 1992 costs and budget by task and subtasks. Figure A.2 shows TSP budget status. Figure A.3 shows Native American research budget status.

Capital Status

The HEDR Project has been approved for $75K of capital funding for FY 1992. Funding for the $75K was transferred from RL to Pacific Northwest Laboratory (PNL) in the March 1992 Financial Plan. The majority of equipment has been received and installed. Expense software upgrades will be ordered to be compatible with the new hardware that has been received.

1. ID (Contract) Number:	2. Program/Project Title:	3. Reporting Period:
18620 (CDC)	HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION - BNW	JULY 1992

4a. Participant Name and Adress	4b. Client Name and Address	5. Start Date
P.O. Box 999 Richland, WA 99352	CDC Atlanta, GA 30333	OCTOBER 1991
		6. Completion Date SEPTEMBER 1992

7. FY 92 | 8. Months

9. Cost Status

a. $ Expressed in: Thousands

b. B&R No./ Subaccount No. 18620

c. FIN No.

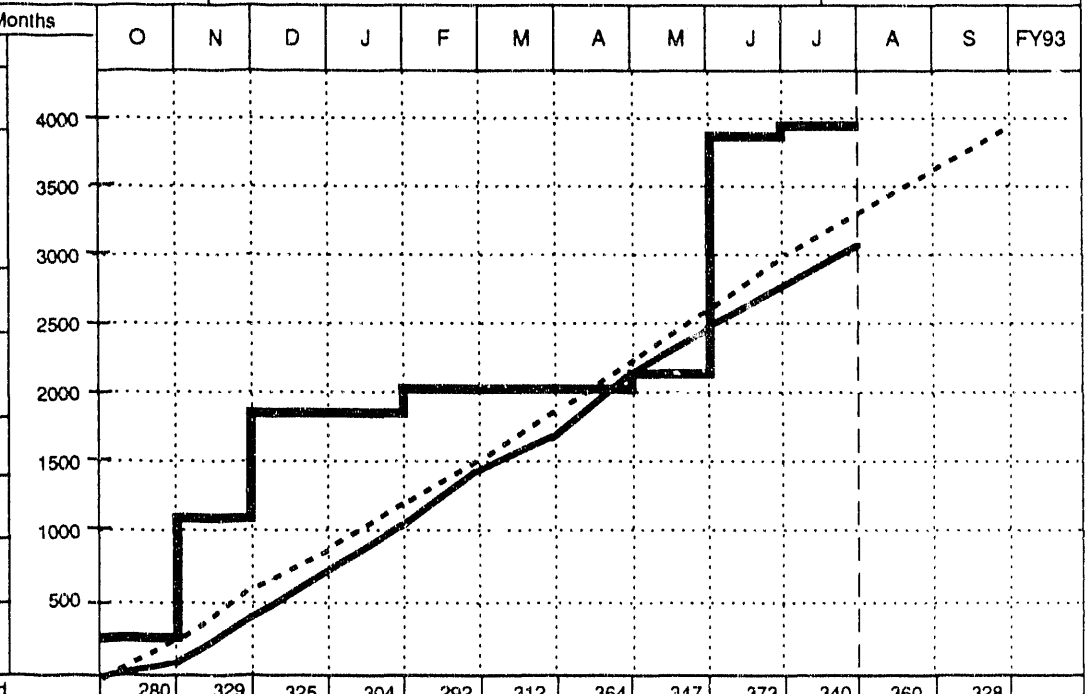
d. Actual Costs Prior Years 10,514 (a)

e. FY Budget 3,954 (b)

f. Total Budget

g. FY Funds Auth. 3,954 (c)

h. Total Funds Auth. 14,469 (d)



		O	N	D	J	F	M	A	M	J	J	A	S	FY93
Costs	i. Planned	280	329	325	304	292	312	364	347	373	340	360	328	
	j. Actual	191	244	310	295	307	355	345	395	332	348			
	k. Variance	89	85	15	9	-18	-44	17	-51	76	-8			
	l. Cum Planned	280	609	934	1238	1530	1842	2206	2553	2926	3266	3626	3954	
	m. Cum Actual	191	435	745	1040	1347	1700	2046	2442	2774	3122			
	n. Cum Variance	89	174	189	198	180	136	153	102	178	144			

10. Legend: Planned - - - - - Actual ——— Funds Auth. ■■■ 90% Funds Spent ⚐ Time Now

(a) "Actual cost prior years" excludes TSP costs but includes Native American research costs. (TSP prior year costs are shown separately in Figure A.2.) (b) Projected budget excludes TSP and Native American research budgets. (c) Includes carryover and PNL's share of current fiscal year funding that has been received. (d) FY 88-92; excludes capital, TSP funding, and FY 91 carryover and FY 92 funding for Native American research.

11. Name/Signature of Participants Prog/Proj Manager & Date
D. B. SHIPLER

Figure 2. HEDR Project Budget Status - Battelle Pacific Northwest Laboratories

Acronyms and Abbreviations

AP	Associated Press
BNW	Battelle Pacific Northwest Laboratories
CDC	Centers for Disease Control
CIDER	calculation of individual doses from environmental radionuclides (computer code)
DESCARTES	dynamic estimates of concentrations and accumulated radionuclides in terrestrial environments (computer code)
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy Headquarters
DQO	Data Quality Objective
FY	fiscal year
GENII-S	generation II-SUNS (computer code)
HEDR	Hanford Environmental Dose Reconstruction
HHIN	Hanford Health Information Network
HNIS	Health and Nutrition Information Service
HTDS	Hanford Thyroid Disease Study
IAEA	International Atomic Energy Agency
IHS	Indian Health Service
NFCS	National Food Consumption Survey
NTIS	National Technical Information Service
OMB	Office of Management and Budget
PARSEL	parameter selection (computer code)
PNL	Pacific Northwest Laboratory
QA	quality assurance
RATCHET	regional atmospheric transport code for Hanford emissions tracking
REPGEN	report generation code
RIDS	records inventory and disposition schedule
RL	U.S. Department of Energy Richland Field Office
SESRC	Social and Economic Sciences Research Center (Washington State University)
SOW	statement of work
STRM	source term release model
SUNS	sensitivity/uncertainty system
TSP	Technical Steering Panel
USDA	United States Department of Agriculture
VAMP	validation of model predictions
WSU	Washington State University

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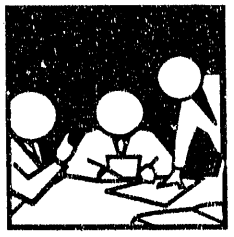


Task 01
Battelle Project Management

Objective

The objective of the Battelle Project Management Task is to provide project planning, control, and management of Battelle dose reconstruction work in accordance with the CDC contract and TSP technical direction.

Progress

Milestone 0101F **- Project Management Plan Revision, due August 1992 and rescheduled to September 1992**

- continued revising existing Project Management Plan to update it

Other Activities

- attended the TSP meeting in Astoria, Oregon, July 16-18, 1992. At a meeting with HQ, RL and CDC a number of key items were concluded:

  1) No additional funds will be provided by DOE or CDC for FY 1992.

  2) No additional funds can be transferred from other programs to HEDR.

  3) DOE-HQ cannot guarantee carryover of unspent FY 1992 funds. Battelle funds through the CDC contract can be carried over.

  4) CDC cannot place Native American contracts by October 1, 1992. Battelle will be asked to extend the existing subcontracts through December 31, 1992. Funds for this period will be transferred from the CDC FY 1993 allocation for HEDR to DOE for distribution to the Native American tribes.

  5) Battelle was asked to continue to support the tribes by assisting them to develop scopes of work and prepare their proposals in response to Battelle and CDC requests for proposals for HEDR work.

  6) TSP subcontracts beyond September 30, 1992 will be managed by the State of Washington for CDC.

Major Problem Areas or Changes and Action Taken

Because anticipated DOE funds were not provided for FY 1992 work that was behind schedule, several FY 1992 activities and several associated reports have been rescheduled to FY 1993.

Milestone 0101E, FY 1993 Updated Task Plans, was changed to 1992-1994 Integrated Task Plans, due September 1992. These integrated task plans will contain scope, approach, milestones, and budget for Battelle's entire contract period with the CDC.

A stop-work order was issued for Subtask 0702, Environmental Accumulation and Dose Code Development. Tasks 02 (Technical Integration) and 08 (Statistics) will pick up the necessary work to reduce the impact and do testing necessary to develop the sensitivity/uncertainty analysis plan. Battelle management and HEDR staff are developing a recovery plan for the Subtask 0702 DESCARTES and CIDER codes. The plan is expected to be presented to the TSP in October and implemented immediately thereafter. The codes will be corrected, redesigned and coded to meet all criteria.

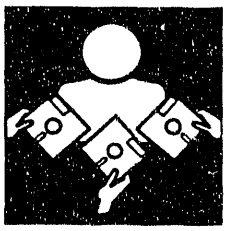
Variance

No significant cumulative variance.

Planned Work for the Next Three Months

- update and issue revised Project Management Plan (Milestone 0101F)

- issue a task plan that covers work funded in the CDC 2-year contract with Battelle. This task plan will combine the individual fiscal year task plans into one task plan.
- negotiate budget adjustments with the TSP and CDC to perform critical work that is currently not funded ❑



Task 02
Technical Integration

Objective

The objective of the Technical Integration Task is to provide technical overview of the project to ensure that appropriate technical activities are planned, that appropriate information is generated, and that technical task work is integrated effectively for performing the final dose calculations.

Progress

Milestone 0204A - Letter Report: Data Management Plan, due May 1992 and rescheduled to FY 1993

- continued interviews with project staff concerning existing databases and data structures. Continued drafting sections of the report.

Milestone 0204B - Recommendation on Modeling or Monitoring Approach for River Pathway, due June 1992, rescheduled to July 1992 and completed

- presented results and distributed Volume 1 of the study to TSP at Astoria, Oregon meeting July 16 - 18. Volume 2 has completed the clearance process and is in final production prior to distribution.

Milestone 0205B - Letter Report on Key Radionuclides, due May 1992, rescheduled to September 1992

- began addressing the following topics: derivation of the four main terrestrial plant types; iodine uptake via skin absorption; irrigated crops; use of measured gross beta information as a surrogate for radionuclide spectral data for early fish measurements; game birds; cisterns and farm ponds; dairy cow intakes via inhalation and contaminated stored feed; additional terrestrial and aquatic animal products; atmospheric releases of hot particles; river releases from fuel failure; and review and updating of release fractions for radionuclides other than iodine. This report should now be viewed as a "key pathways and radionuclides" document.

Other Activities

- presented information at the TSP meeting in Astoria, Oregon concerning the recommendations for future work on the river pathways and followed up with meetings with TSP members in Richland
- participated in a review of the Task 0702 dose codes DESCARTES and CIDER. The current implementations of these codes were determined to be inadequate, and follow-up activities were initiated to prepare a plan for corrective actions.
- coordinated with Task 06 to prepare an "importance ranking" for various locally-produced vegetable crops. This work contributes to Milestone 0603C, Letter Report: Assessment of Fruit and Vegetable Pathways, 1944-1957.
- prepared draft of Hanford scenario for International Atomic Energy Agency VAMP project
- issued *HEDR Modeling Approach* (PNWD-1983 HEDR)

Major Problem Areas or Changes and Action Taken

The implementation of the DESCARTES and CIDER modules was determined to be inadequate for the complete range of HEDR purposes. This will cause delays in milestones of other tasks. A "tiger team" was established to prepare a corrective action plan. Activities are being coordinated with Task 08 (Statistics) to provide oversight and funding to revise the code implementation to support development of the sensitivity/uncertainty analysis plan. The overall project ability to calculate doses,

starting with the HTDS inputs approximately in March 1993, should not be adversely affected.

Milestone 0205D, Letter Report: Model Parameter Distributions Strategy, was folded into Milestone 0703B, Letter Report: Iodine-131 Parameters and Dose Factors, Revised Model, because information in Milestone 0205D was already covered broadly in Milestone 0703B. The new 0703B milestone is still due in September 1992.

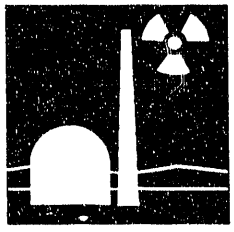
Milestone 0204A, Letter Report: Data Management Plan, was rescheduled to FY 1993 because anticipated DOE funding was not provided for the work associated with this report.

Variance

No significant cumulative variance.

Planned Work for the Next Three Months

- issue Volume 2 of river recommendations report (Milestone 0204B)
- complete and issue key radionuclides/pathways report (Milestone 0205B)
- issue Hanford scenario to VAMP ❑



Task 03 Source Terms

Objective

Source terms are the amount and type of radioactive materials released to the environment. The objective of the Source Terms Task is to develop estimates of radioactive emissions since 1944 from Hanford facilities based on historical measurements and production information. Source term estimates are used by Environmental Transport Task members to reconstruct the concentrations of radionuclides in the environment.

Progress

Milestone 0302A - Documented Phase I Iodine-131 Releases, due May 1991 and rescheduled to September 1992

- completed a final analysis of the data supporting the distribution functions used in the Monte Carlo section of the release model. Work continued on the report. Expect to complete a draft for internal review by mid-August.

Milestone 0307A - Letter Report: Hanford Operations, 1944-1991, due September 1992 and rescheduled to FY 1993

- started working on a draft of this report

Other Activities

- gave two presentations at the TSP Source Term Subcommittee meeting in Astoria. One was on the status of the Documented Phase I Iodine-131 Releases Report (Milestone 0302A), and the other on radionuclide releases to the Columbia River from Hanford.

Major Problem Areas or Changes and Action Taken

The Documented Phase I Iodine-131 Releases Report (Milestone 0302A) will contain large amounts of detailed data that depends on computer software developed specifically for this application. The review of this data as well as verification of software used is time-consuming. Hence it was decided to carry this activity out in parallel with the internal review process of the document. Any changes indicated by the data review and software verification process will be made before the document is released for TSP review.

Variance

The cumulative cost underrun was caused by the delay in quality assurance (QA) work described above. This underrun will be reduced by the QA work necessary before completing the two documents.

Planned Work for the Next Three Months

- complete the Documented Phase I Iodine-131 Releases report (Milestone 0302A)
- continue construction of reactor and separation facility operations database. Produce Letter Report: Hanford Operations, 1944-1991 (Milestone 0307A).
- continue work on river release estimation methods ❑

Task 04
Environmental Transport

Objective

The objective of the Environmental Transport Task is to reconstruct the movement of radioactive materials (the source term information) from the areas of release to the environment. Radionuclide movement via the atmosphere, Columbia River, and groundwater is studied.

Progress

Milestone 0402A - Wind Field Modeling White Paper, due FY 1991 and rescheduled to FY 1993

- continued revision of report

Milestone 0402D - Meteorological Data Report, due December 1991 and rescheduled to FY 1993

- continued entry of meteorological data for 1944-1947. Data entry for 1945 and 1946 is complete; data entry for 1947 should be complete in early August. This report has been folded into Milestone 0405A; see discussion under "Major Problem Areas or Changes and Action Taken."

Milestone 0403A - Groundwater Report, due December 1991, rescheduled to January 1992 and completed

- discussed final revisions to the groundwater report with TSP members S. Davis and J. Till at the July TSP meeting in Astoria, Oregon. Final corrections to the groundwater report were made. Publication date is set for August.

Milestone 0404A - Columbia River Pathway Summary Report, due December 1991, rescheduled to April 1992 and completed

- presented report results at the TSP meeting held in Astoria, Oregon on July 17. Discussed with TSP member P. Klingeman the comments received from the report reviewers to determine how each comment should be addressed by the authors. Correspondence was received from P. Klingeman on July 24, stating that all comments to be addressed have been forwarded to BNW.

Milestone 0404B - Letter Report: Columbia River Conceptual Model, due September 1992 and rescheduled to FY 1993

- continued work to extend the Columbia River map down to the coastal area. Continued work toward finalizing the subcontract with Washington State University.

Major Problem Areas or Changes and Action Taken

The source term data received in May for the Milestone 0402A report were incorrect. Model runs to support the revision of this report will be made when a revised source term data set is received.

Staff limitations have delayed work on Milestone 0402D. A newly hired meteorologist, S. Stage, will pick up some of this work. His initial responsibility is completion of the Interim Atmospheric Model Database Letter Report (Milestone 0405A) due in 1993.

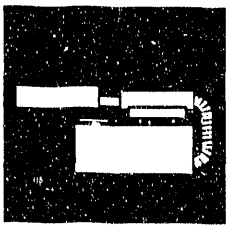
Because Milestone reports 0402D and 0405A cover the same material, they are being combined into one report with a completion date in FY 1993.

Variance

No significant cumulative variance.

Planned Work for the Next Three Months

- publish final TSP-approved version of the groundwater report (Milestone 0403A)
- publish final TSP-approved version of the Columbia River pathway summary report (Milestone 0404A)
- rerun the atmospheric transport code, RATCHET, for 1945
- complete the numerical verification of the RATCHET code
- start preliminary sensitivity studies on the RATCHET code
- continue work on data bases for use with RATCHET ❑



Task 05
Environmental Monitoring Data

Objective

The objective of the Environmental Monitoring Data Task is to search, retrieve, evaluate, and summarize key historical measurements of the concentrations of radionuclides in the environment around the Hanford Site. Radionuclide concentrations have been measured at various times in air, drinking water, foods, fish, the Columbia River, soil, and in other materials. These measurements are evaluated to estimate their accuracies and then used by the Environmental Pathways and Dose Estimates Task to estimate radiation doses and by the Environmental Transport Task to calibrate and validate computer models.

Progress

Milestone 0501A - Environmental Monitoring Data Final Report, due FY 1991 and rescheduled to FY 1993

- evaluated TSP and peer review comments on the document, *HEDR Phase I Summaries for Vegetation, River Water, Drinking Water and Fish Radionuclide Concentration Data.* These comments are now being resolved.

Milestone 0502A - Vegetation Data Report (1945-1951), due FY 1991 and rescheduled to FY 1993

- completed author revisions to the measurement section and modified the data table

Other Activities

- issued a letter report, *Radioactive Contamination of Fish, Shellfish, and Waterfowl Exposed to Hanford Effluents: Annual Summaries, 1945-1972* (PNWD-1986 HEDR)

Major Problem Areas or Changes and Action Taken

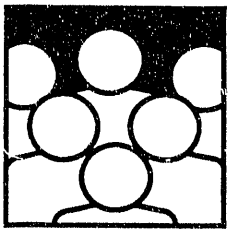
Because Task 05 is one of the tasks affected by the FY 1992 fund shortage, Task 05 reports have been rescheduled to FY 1993. Beginning October 1992 the Milestone 0501A report comments from the TSP will be resolved and editing begun. Also beginning in FY 1993 the Milestone 0502A and 0502B reports will be combined and issued under the title *Monitoring Data and Reconstructed Conversion Factors for Hanford Area Vegetation Samples, 1945-1951.* The TSP agreed to merging the two reports in order to avoid much duplication and produce more cohesive information. The result will be a savings in publication time and money.

Variance

The cumulative cost overrun is caused by the significant effort devoted to the Task 05 reports noted above. Future Task 05 expenses will be delayed until FY 1993.

Planned Work for the Next Three Months

- resolve (beginning October 1, 1992) comments on Milestone 0501A
- continue (beginning October 1, 1992) to make necessary changes to and combine the Milestone 0502A - Vegetation Data Report (1944-1951) and the Milestone 0502B - Vegetation Monitoring Data (1949-1951) letter report ❑



Task 06
Demography, Food Consumption, and Agriculture

Objective

The objective of the task is to develop the population and agricultural data needed to estimate the population doses that may have resulted from historical releases of radioactive materials from operations at the Hanford Site.

Progress

Milestone 0603C - Assessment of Fruit and Vegetable Pathways, 1944-1957, due June 1992 and rescheduled to September 1992

- completed the production and distribution portion of the fruit and vegetable report
- provided information to W. Farris and B. Napier to construct a pathway importance ranking of fresh produce. B. Napier and B. Farris completed the preliminary dose estimate section.
- attended the TSP meeting July 16-17, in Astoria, Oregon and presented the fresh fruit and vegetable production and distribution results to the TSP Demographic Subcommittee

Milestone 0603D - Milk Production/ Distribution Report, 1944-1991, due March 1993

- completed a revised questionnaire which includes the latest modification suggestions from HEDR program staff and the TSP subcommittee for Task 06. The questionnaire has been sent by WSU to the full TSP for review and comment.

Food Consumption (Subtask 0602)

- received the Summer and Fall 1977-78 National Food Consumption Survey (NFCS) raw data on magnetic tape from National Technical Information Service. Battelle now has the complete data set for the 1977-1978 NFCS and all remaining data from the 1965 NFCS.
- continued working with R. Bates of Task 08 (Statistics) to analyze the 1965 data already in-house and to familiarize him with the food consumption subtask. Developed backcasting ratios for use in the fruits and vegetables dose importance index. Presented T. Marsh with food consumption estimates for that index based on data from the 1965 NFCS. The 1965 NFCS data were used in lieu of having the complete 1977-1978 data.
- began developing the backcasting ratios for 1945:1977, 1951:1977, and 1957:1977. These ratios will be used with the 1977-1978 NFCS data to provide estimates of food consumption to be reported in the food consumption final report due in March 1993. The ratios are being estimated from per capita consumption data available in the annual United States Department of Agriculture publication, *Agricultural Statistics*.

Milk/Other Food Model Development (Subtask 0603)

- continued work on developing supplemental expert elicitation information. Draft text and data sheets have been forwarded to D. Beck for review and comment.

Native American Data (Subtask 0605)

- met with CDC, Indian Health Service (IHS), TSP, and HTDS staff to prepare for TSP meeting in Astoria, Oregon
- helped facilitate the Native American Working Group meetings held in conjunction with the Astoria TSP meeting. One significant outcome was a decision by the Working Group to consider a standard protocol for tribes to develop to complete their remaining data collection and analysis.

- met with the Working Group to discuss outlines for the standard protocol. This has required a detailed assessment of the specific data requests that have been relayed to participating tribes from HEDR and HTDS.
- contacted tribal representatives to determine the status of their efforts to develop proposed statements of work. These contacts have included initial technical assessments of proposed statements of work for the next round of work orders. Proposed statements of work have now been received from the following tribes: Colville, Yakima, Kalispel, Coeur D'Alene, and Umatilla.
- provided assistance to the Confederated Tribes of the Umatilla Indian Reservation to aid in their data reduction and entry task. A summary of data from five interviews was received from the Confederated Tribes of the Umatilla Indian Reservation.
- continued to review relevant published and unpublished information sources that will help to independently assess the reliability, validity, and uncertainty associated with key informant and sample survey interview data regarding food consumption and mobility patterns. A special assessment of Native American infants' milk consumption is under way.

Major Problem Areas or Changes and Action Taken

There is uncertainty on how to expedite the Office of Management and Budget (OMB) clearance for the face-to-face producers' questionnaire. We have contacted P. Myers of the Fred Hutchinson Cancer Research Center to learn from the Center's experience the best way to expedite the producers' questionnaire through OMB clearance.

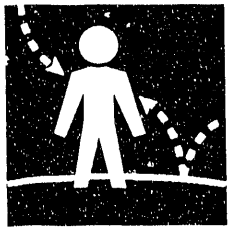
Work on negotiating and signing a Task 06 contract with WSU/SESRC for support work is on hold until funding questions have been resolved. Funding for Task 06 is currently under discussion at the Project Office and TSP level.

Variance

The cumulative cost underrun is caused by delayed contracting with and invoicing of WSU agricultural survey work.

Planned Work for the Next Three Months

- complete the letter report, Assessment of Fruit and Vegetable Pathways, 1944-1957 (Milestone 0603C)
- review reports concerning Native American milk consumption and culturally patterned nursing practices to determine what information is lacking
- review feasibility of alternatives for representing spatial distribution of tribal members' residential locations using unpublished residential location data compiled in the early 1960s for the Colville, Yakima, and Nez Perce tribes
- review of tribal work plans for remainder of FY 1992
- accompany CDC staff on visits to each tribe to discuss future work plans ❑



Task 07
Environmental Pathways and Dose Estimates

Objective

The objective of the task is to use calculated and measured concentrations of radionuclides provided by members of the Environmental Transport Task and the Environmental Monitoring Data Task to calculate doses to populations, representative individuals, and specific individuals. These calculations include doses via direct transfer of radionuclides from concentrations in air and water to people (such as breathing, drinking, and immersion). The calculations also include doses from radionuclide concentrations in air and water transferred through environmental pathways, such as soil, plants, animals, and fish, to people.

Progress

Milestone 0703B - Letter Report: Iodine-131 Parameters and Dose Factors, Revised Model, due February 1992 and rescheduled to September 1992

- submitted report for project office review

Pathways and Dose Code Development and Documentation (Subtask 0702)

- initiated code testing and streamlining
- modified the stochastic parameter selection code, PARSEL, in order to produce the input data for 100 realizations of the year 1945 that are required for the sensitivity analysis plan review. These modifications are required to reduce the data storage requirements. The modifications include a reduction in variability of some parameters by removing node dependencies.
- The DESCARTES code is operational, but some errors have been found in the output data. The code and conceptual models are being reviewed to locate the source of the errors. At this time, when changes are made to the PARSEL code, changes must also be made to DESCARTES. This is a result of the data transfer that occurs between these two codes.
- continued "debugging" the CIDER code. The software is encountering problems with certain input parameters that are transferred from the PARSEL code. This type of data transfer exists between PARSEL and DESCARTES and the exact cause of the PARSEL-CIDER transfer is being investigated.

Dose Calculations (Subtask 0705)

- Dose calculations to support Task 06 (Demography, Food Consumption and Agriculture) activities were conducted during July. The calculations were done in order to determine the relative importance of 30 different fresh fruits and vegetables. The impacts of the produce distribution system on the doses to representative individuals were determined.

Major Problem Areas or Changes and Action Taken

Milestone 0702B was originally intended to document the population dose model and was expanded to include the reissuance of the integrated code document (PNL-7993 HEDR) and the code design specifications report. This expanded report was to include documentation of the DESCARTES and CIDER models and computer coding, the parameter selection code (PARSEL) and the report generation code (REPGEN) in addition to the population dose model. Based upon recent internal reviews of the code structure and model documentation, the DESCARTES, CIDER, and PARSEL codes have been determined to require additional enhancements. These enhancements are required to meet the needs of other tasks, specifically the Task 08

sensitivity analysis workshop, and to efficiently calculate all air pathway and Hanford Thyroid Disease Study (HTDS) doses in FY 1993. With concurrence by the TSP, Milestone 0702B will revert to its originally intended scope to include only the population model as originally planned. Upon completion of the code enhancements, documentation of the DESCARTES, CIDER, and PARSEL codes will be made available.

In addition, the computer codes to be used to estimate the doses from atmospheric releases are not operational. An internal technical review of the codes by software design experts has found problems with the code structure, functionality, and code testing. A corrective action plan is currently being developed to address these problems. This corrective action plan outlines the needs, coding modifications, code testing, personnel changes, reporting requirements and revised schedules that are required to complete the PARSEL, DESCARTES, and CIDER codes.

Upon completion of the corrective action plan and review by HEDR Project management, the corrective action plan will be submitted to the TSP for approval prior to implementation. With the exception of the revised-scope 0702B milestone, as described above, no scope or schedule changes are required at this time.

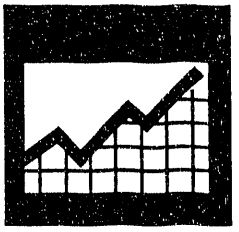
Milestone 0205D, Letter Report: Model Parameter Distributions Strategy, was folded into Milestone 0703B, because the Milestone 0205D information was already broadly covered in Milestone 0703B.

Variance

The cumulative cost overrun is primarily caused by Subtask 0702, where four staff members are completing computer coding for DESCARTES, CIDER, PARSEL, and REPGEN.

Planned Work for the Next Three Months

- combine the iodine-131 parameters and dose factors report for revised air pathway codes (Milestone 0703B) with the model parameter distribution strategy report (Milestone 0204D) and issue as one report
- complete and implement corrective action plan for Subtask 0702
- compute doses for representative individuals from a limited set of age/sex/lifestyle groups. The report generator program REPGEN will then be used to report the model outputs. These initial results will be used only for purposes of developing a draft sensitivity/uncertainty analysis plan and for model verification activities.
- subject the codes and documentation to a Final Internal Development Review in fulfillment of software QA requirements. A test plan that is currently being written to specify formal verification testing of DESCARTES and CIDER will be completed.
- document the DESCARTES, CIDER, and PARSEL computer codes ❑



Task 08
Statistics

Objective

The objective of the task is to provide statistical support to other technical tasks and develop and apply sensitivity and uncertainty analyses. Sensitivity analyses will be used to identify parameters with the greatest influence on dose estimates. Sensitivity analyses results will be used to focus resources where the benefit in terms of accurate dose estimates is greatest. Uncertainty analyses enable the project to determine the extent to which the accuracy and precision of the dose estimates are influenced by accuracy and precision in the input parameters.

Progress

Milestone 0802A - Iodine-131 Conversion Factor Report, due December 1991, rescheduled to July 1992 and completed

- sent this report, *Uncertainty and Sensitivity Analysis of Historical Measurements of Iodine-131 for Vegetation in 1945-1947 (PNWD-1978 HEDR)*, to the CDC and the TSP for review and comment. Presented a summary of this report at the TSP meeting in Astoria, Oregon, on July 17. The paper will also be presented at the 1992 Joint Statistical Meetings in Boston the week of August 9, 1992.

General Statistics Support (Subtask 0802)

- reviewed a draft of the Milestone 0603C letter report, Assessment of Fruit and Vegetable Pathways, 1944-1957
- assisted Subtask 0602 (Status of Food Consumption Methodology) with food consumption estimates and database of individual diets
- completed internal clearance of the paper, *Uncertainty Issues of the Hanford Environmental Dose Reconstruction (HEDR) Project*, for presentation at the symposium, Environmental Statistics, Assessment and Forecasting at the American Chemical Society National Meeting, August 23-27, in Washington, DC. This paper will be published in the proceedings of the symposium.

Analysis of Model Reliability (Subtask 0803)

- assisted Task 03 (Source Terms) with code verification and quality assurance of the source term release model
- assisted Subtask 0402 (Atmospheric Model Development) with sensitivity and uncertainty analysis of RATCHET
- coordinated the corrective action for the environmental accumulation and dose codes

Major Problem Areas or Changes and Action Taken

The environmental accumulation and dose codes (DESCARTES, CIDER and PARSEL) have not been finished. Thus the case studies needed to prepare the sensitivity and uncertainty analysis plan are not available. In a technical review of the codes, it was determined that the codes as currently implemented would be inadequate to meet the FY 1993 milestones. While the subroutines within the codes perform as they should, the communication between the subroutines are inefficient which would make it impossible for the codes to perform the large runs that they must do for the HTDS and for FY 1993 Milestones 0705A and 0705C (dose calculations).

Corrective action has been started to address the deficiencies in the codes and to ensure that the FY 1993 milestones can be meet. However, until

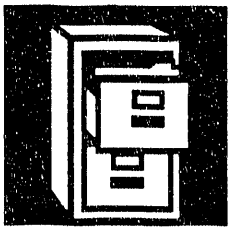
this corrective action is completed, there will be no case studies for use in the sensitivity and uncertainty analysis plan. Thus the sensitivity and uncertainty analysis plan will not be finished until December 1992 and the review of this plan will need to be rescheduled to January or February 1993, depending on when all the participants are available.

Variance

The cumulative cost underrun was caused by delay in completing the dose code and postponement of the sensitivity/uncertainty plan review to January 1993.

Planned Work for the Next Three Months

- prepare a draft of the Milestone 0803A letter report, Project Sensitivity/Uncertainty Analysis Plan
- revise Milestone 0802A report, Iodine-131 Conversion Factor Report, to reflect comments on the draft by the CDC and TSP
- continue planning the sensitivity/uncertainty analysis plan review meeting
- continue to serve on the survey design team, which supports the survey of agricultural producers being conducted by WSU
- install the computer board that upgrades the HEDR SUN computer from a 4/490 to a four processor 690 machine
- present the paper *Uncertainty Issues of the Hanford Environmental Dose Reconstruction (HEDR) Project*, at the symposium, "Environmental Statistics, Assessment and Forecasting," on August 26, 1992
- present the paper, *Uncertainty and Sensitivity Analysis of Historical Measurements of Iodine-131 for Vegetation in 1945-1947*, at the 1992 Joint Statistical Meetings in Boston the week of August 9, 1992 ❑



Task 09
Records Management

Objective

The objective of the Records Management Task is to provide storage and control of completed project records, maintain an automated inventory of all project documentation, and provide a reference service to project staff and the TSP.

Progress

- received project records from the HEDR Project Office - 31 records totalling 1,319 pages
- verified, processed, and stored project records - 23 records totalling 170 pages
- transferred two packages of records to the U.S. Department of Energy, Richland Field Office (RL) Public Reading Room - 4 records totalling 115 pages
- met with L. Wilhelmi to discuss controlling electronic information for HEDR. Provided him with information about the hardware and software for Task 9, and he agreed to provide me with a list of the systems to be included in our inventory on the records inventory and disposition schedule/file index (RIDS).
- scheduled training for project staff on records management, which will be presented as part of the HEDR team monthly meeting

Major Problems or Changes and Action Taken

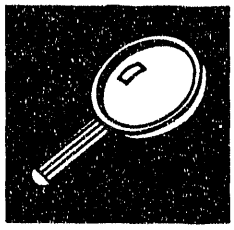
None.

Variance

The cumulative cost underrun resulted from records management activities that were less than expected.

Planned Work for the Next Three Months

- continue processing incoming project records
- continue transferring processed project records to the RL Public Reading Room
- provide assistance to the project office as needed to prepare and transfer records to the Records Center ❑



Task 10
Quality Assurance

Objective

The objective of this task is to ensure continuous quality assurance (QA) support and coordination with all project tasks. This objective is met through the identification and documentation of QA requirements in the form of a QA Plan and periodic monitoring of project activities during the life of the project to ensure compliance with these requirements.

Progress

- issued revised Quality Assurance (QA) Plan, OHE-3, Rev 5 to the project staff
- planned a surveillance on training to verify that the project was in compliance with BNW's QA training procedure, PAP-70-201. Results of this surveillance identified two non-compliances, which have been or are being corrected.
- provided QA assistance to new staff on software QA procedures and assisted with the revision of the training matrix used by staff to identify necessary training
- developed checklist which will be used by the HEDR staff as a self-assessment and verification tool to measure the implementation and achievement of data quality objectives
- reviewed and provided comments on the following reports to assure that data quality objectives were included and addressed adequately: *Recommendations to the Technical Steering Panel Regarding Approach for Estimating Individual Radiation Doses Resulting from Releases of Radionuclides to the Columbia River*, Volumes 1 and 2; *Media Information Review, January-June, 1992*; and *Preliminary Dose Estimates for Commercially Produced Fresh Fruits and Vegetables*

Major Problem Areas or Changes and Action Taken

Implementation of the corrective actions from the BNW FY 1991 audit have not been completed and closure of this audit prior to the beginning of the next audit may not be achieved. Staff are presently working to implement the necessary actions, given the time and resources required to complete this activity.

Additional software QA support personnel will be assisting the technical staff in the establishment of the necessary checks and controls for software development prior to the formal configuration management phase as required in th Battelle QA procedures. All activities will be integrated with the overall QA support and verification activities.

Variance

The cumulative cost underrun was caused by lack of staff availability in July.

Planned Work for the Next Three Months

- finalize critical decision plan and issue the implementing procedure: HEDR-TP-3, "HEDR Documentation of Critical Decisions"
- develop action tracking procedure to be used for documenting results of technical staff meetings
- continue performing oversight activities to check for compliance to project technical, QA, and data quality objective requirements and for implementation of corrective actions for the last audit
- continue readiness review preparation for the internal Battelle audit ❑

Task 11
Information Resources

Objective

The objective of the Information Resources Task is to work with other tasks to meet information needs, including ensuring that all data referenced in the reports are publicly available and establishing a microcomputer-based tracking system for ready retrieval of historical information.

Progress

Milestone 1102A, Letter Report: Declassified, Prioritized Document List, due September 1992

- declassified 359 Hanford-Site originated documents, 85 of which are of potential interest/use to the project. Table 11.1 shows the status of declassification to date. All TSP/public requested declassifications of Hanford historical documents generated from 1944-1960 have been completed. Milestone report 1102A will address this activity and will be distributed in September.

Milestone 1103A, Letter Report: Status of Document Search and Data Quality Objectives Efforts, due September 1992

- assisted TSP member B. Shleien during a week-long stay in Richland to review the Hanford Historical Card Catalog. He completed about 17% of the review and identified seven reports he wanted added to the HEDR tracking database. All seven reports were unclassified when generated and all are publicly available.

Table 11.1. Declassification of Hanford-Originated Documents

Documents Declassified	Hanford Historical	HEDR-Related[a]
March 1987-September 1987 (FY 1987)	35	27
October 1987 through September 1988 (FY 1988)	52	37
October 1988 through September 1989 (FY 1989)	186	177
October 1989 through September 1990 (FY 1990)	455	236
October 1990 through September 1991 (FY 1991)	1323	599
October 1991 through July 1992 (FY 1992)	2208[b]	332[b]
TOTAL (March 1987 - July 1992)	4259[b]	1408[b]

(a) Reported in HEDR monthly reports and included in a HEDR master listing in the RL Public Reading Room. Some of these are from the list requested by the TSP and the public.

(b) Correction: FY 1992 and March 1987 - June 1992 totals were incorrect in Table 11.1 of the June Monthly Report. The totals should have been: FY 1992 Hanford Historical - 1849, HEDR-Related - 247; March 1987 - June 1992 Hanford Historical - 3900, HEDR-Related - 1323.

- assisted TSP member M. Robkin during a 5-day stay in Richland to review documents relative to his summer assignment for the TSP
- collected additional daily separations processes data and related information. The year 1954 was completed.
- added new citations to the tracking system that now contains nearly 5700 citations
- verified references in several HEDR reports
- assumed responsibility for operating the RL Public Reading Room on July 1, 1992. It is expected the facility will be relocated to the Washington State University/Tri-Cities campus before the end of the calendar year.
- provided the RL Public Reading Room with 70 documents (~11,000 pages) of potential interest/use in the HEDR Project. A title listing of these reports is given in Appendix B.

RL Public Reading Room Activity

In July, the Reading Room had 14 HEDR patrons and distributed 31 HEDR reports.

Major Problem Areas or Changes and Action Taken

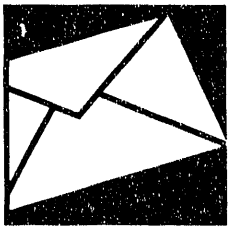
The preparation of the title listing of Hanford-Site-originated reports which are currently classified and address operations for years 1961-1972 continues to await direction and funding from the CDC through RL.

Variance

No significant cumulative variance.

Planned Work for the Next Three Months

- complete Milestone 1102A, Declassified, Prioritized Document List
- complete Milestone 1103A, Status of Document Search and DQO Efforts
- continue input to the information resources tracking database and provide documents to the RL Public Reading Room in an orderly, timely fashion
- watch for information that may explain in detail, and support data in, "green run" document HW-17381 DEL REV 1
- identify significant documents that address fuel element failures that occurred in now decommissioned Hanford production reactors
- continue to develop "packing lists" for boxes of retired Hanford records of potential interest/use to the project
- identify and collect documents that address reactor purges, 1944-1971
- identify and retrieve data on ruthenium releases from separations processes ❑



Task 12 TSP Communications Support

Objective

The objective of this task is to assist the TSP in developing competent communications strategies to further establish an effective, informative dialogue with interested audiences, provide public and media relations support, and manage activities that foster a better understanding of the HEDR process and its progress.

Progress

Milestone 1203C **- Letter Report: Mid-Year Media Analysis, 1992, due June 1992, rescheduled to July 1992 and completed**

- completed *Media Information Review, January-June 1992* (PNWD-1992 HEDR)

Other Activities

- attended TSP public meeting and the TSP Communications Subcommittee meetings held in Astoria, Oregon
- responded to and arranged interviews with local, Northwest and national media during and following the TSP Public Meeting in Astoria, Oregon. Most interest dealt with findings within the report, *Literature and Data Review for the Surface-Water Pathway: Columbia River and Adjacent Coastal Areas* (PNL-8083 HEDR). Contacts were made with six journalists, two news network representatives, four television and four radio reporters.
- provided general HEDR Project information to callers from Portland, Oregon; San Francisco, California; Pasadena, California; Sunnyvale, California; and Richardson, Texas. Each was encouraged to call the 800 number and register themselves on the mailing list.
- provided the surface-water pathway report (PNL-8083 HEDR) to K. Hart, Environmental Health News, Washington, D.C. Summaries of the report were sent to J. McElhaney, Bonneville Power Administration, Portland, Oregon, and J. Van Dyke, San Francisco, California.

Major Problem Areas or Changes and Action Taken

None.

Variance

No significant cumulative variance.

Planned Work for the Next Three Months

- attend TSP Public and Communications Subcommittee meetings in Pasco, Washington, October 8-10 ❑

Appendix A

Milestones, Schedule, and Costs

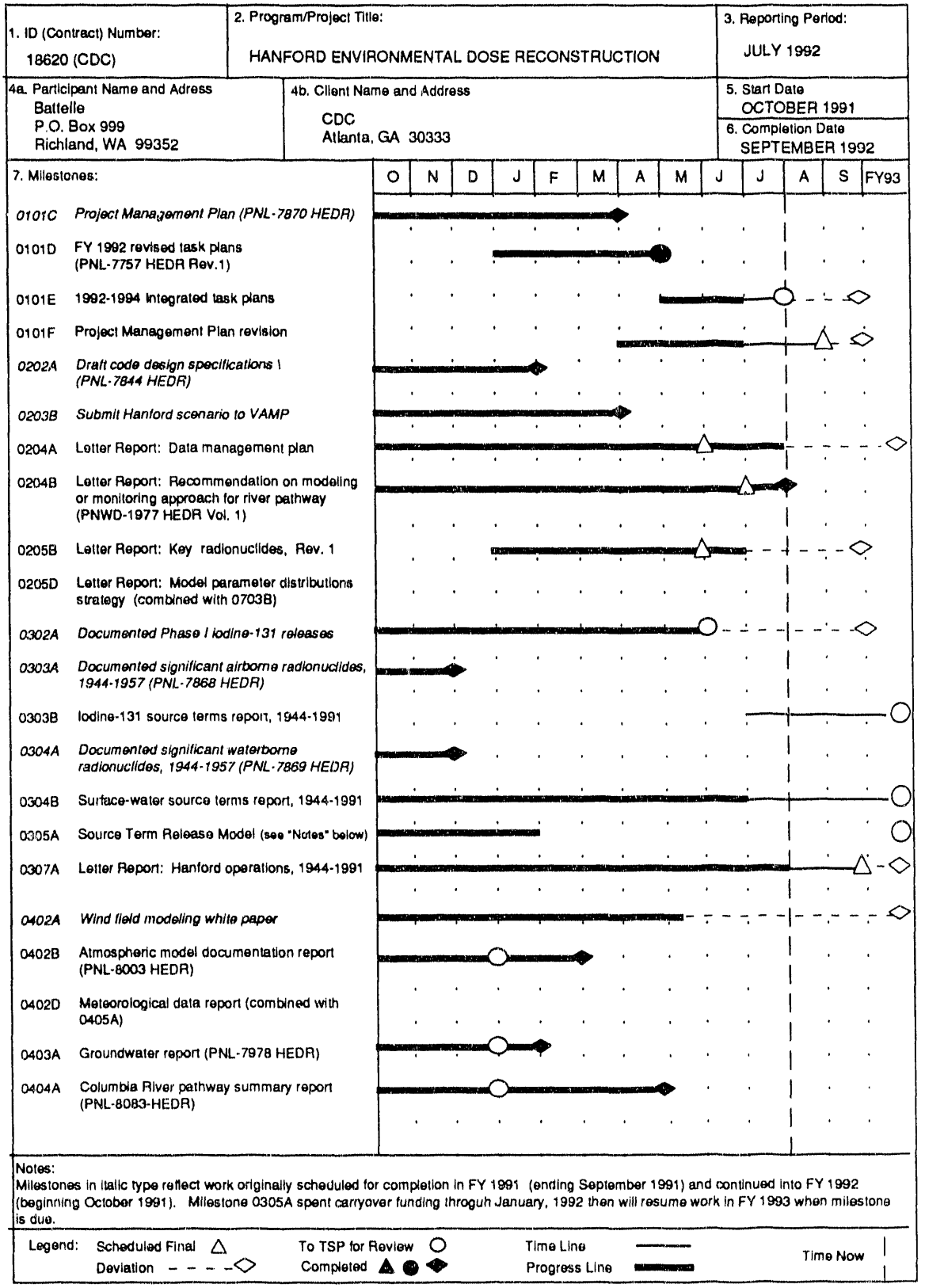


Figure A.1. HEDR Project Milestones

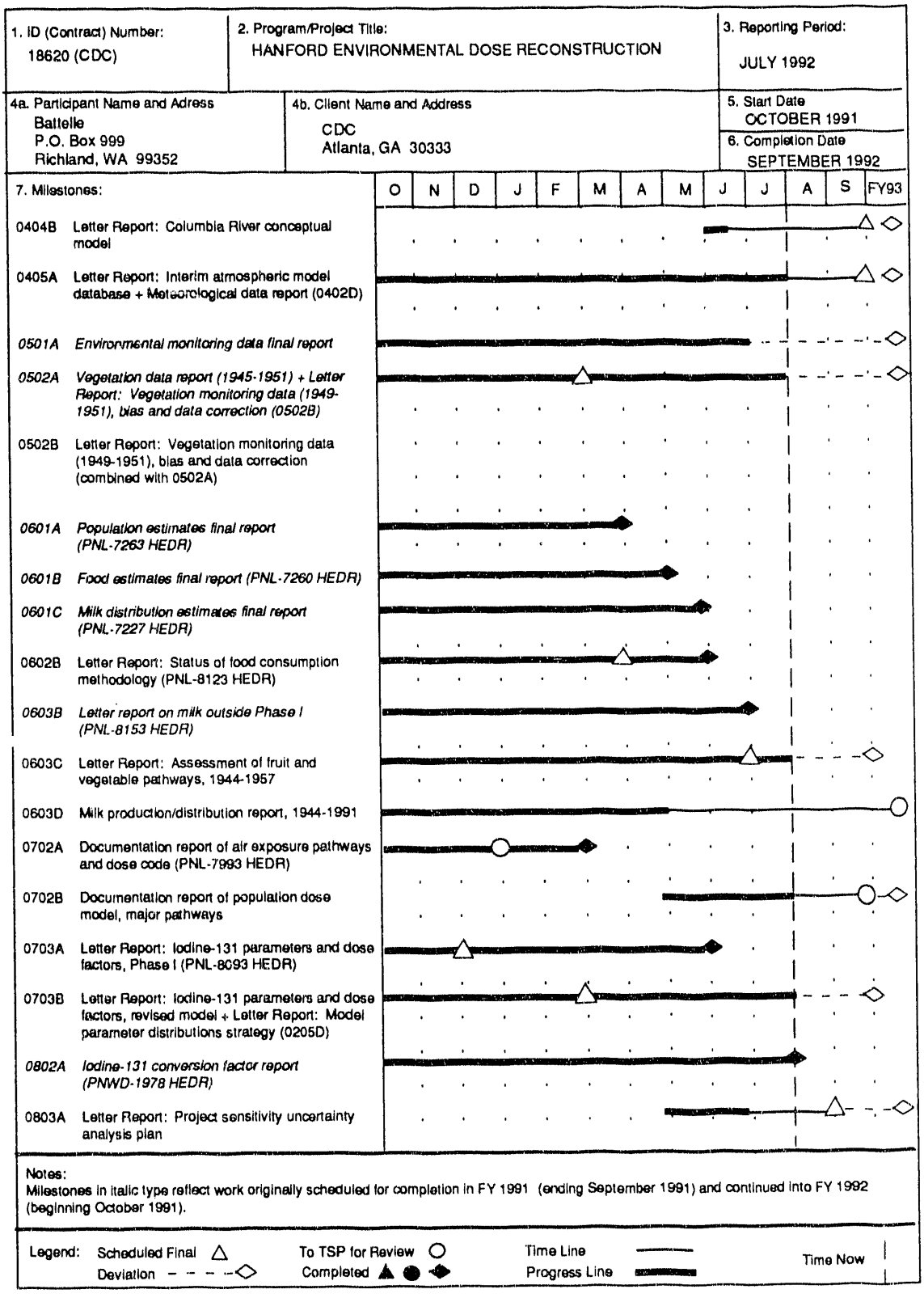


Figure A.1. HEDR Project Milestones (contd)

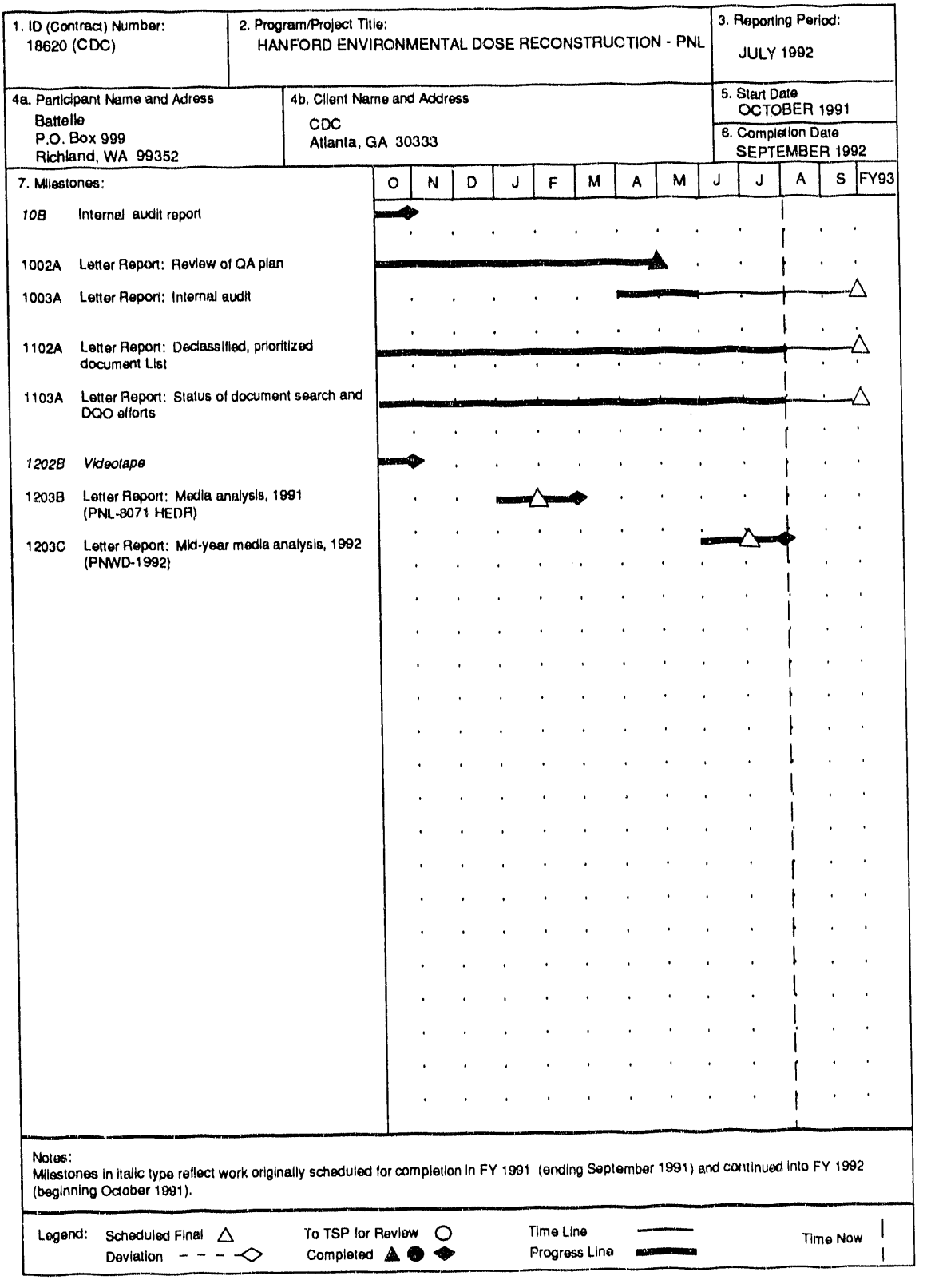


Figure A.1. HEDR Project Milestones (contd)

Table A.1. Cost Summary (Dollars in Thousands)

HEDR Project Tasks	July 1992 Labor $	July 1992 Non-Labor $ (a)	July 1992 Total $	FY 1992 to Date (October 1991 - September 1992) Labor $	Non-Labor $ (a)	Total $	Cum(b) Planned	Cum Variance	TSP (c) Approved FY Budget	CDC (d) Negotiated Budget Adjustments	CDC (e) Contract FY Budget	Funds Remaining	Budgeted FY Labor Hours
Task 01 - Project Management (f)													
0101 Project Planning & Control	59	13	72	497	131	628	574	-54	727	-49	678	50	7,285
0102 Final Phase I Reports	0	0	0	11	5	16	12	-4	12	1	13	-3	250
0103 Project Administration	17	9	26	222	36	258	312	54	413	-39	374	116	5,742
0104 Project Peer Review	1	0	1	32	1	33	29	-4	42	-1	41	8	372
Subtotal Task 01	77	22	99	762	173	935	927	-8	1,194	-88	1,106	171	13,649
Task 02 - Technical Integration													
0201 Tech Planning/Control/Rep	5	1	6	51	2	53	57	4	71	-2	69	16	670
0204 Proj Tech Cord /Analysis	17	1	18	90	4	94	77	-17	77	30	107	13	941
0205 Path & Dose Model Require	11	3	14	57	6	63	83	20	129	-26	103	40	1,335
Subtotal Task 02	33	5	38	198	12	210	217	7	277	2	279	69	2,946
Task 03 - Source Terms													
0301 Tech Planning/Control/Rep	5	0	5	30	6	36	41	5	46	0	46	10	403
0302 Closure of Ph I Iodine Rel	0	0	0	19	1	20	5	-15	5	0	5	-15	54
0304 Rad Releases to Water	11	1	12	36	1	37	88	51	98	1	99	62	870
0305 Source Term Release Model	0	0	0	6	10	16	5	-11	5	0	5	-11	54
0307 Rad Release Data Avail/Rev	5	0	5	138	8	146	151	5	180	-3	177	31	2,154
Subtotal Task 03	21	1	22	229	26	255	290	35	334	-2	332	77	3,535

Table A.1. Cost Summary (Dollars in Thousands) (contd)

	July 1992			FY 1992 to Date (October 1991 - September 1992)									
	Labor $	Non-Labor $ (a)	Total $	Labor $	Non-Labor $ (a)	Total $	Cum(b) Planned	Cum Variance	TSP (c) Approved FY Budget	CDC (d) Negotiated Budget Adjustments	CDC (e) Contract FY Budget	Funds Remaining	Budgeted FY Labor Hours
Task 04 - Environmental Transport													
0401 Tech Planning/Control/Rep	0	0	0	1	0	1	0	-1	0	0	0	-1	0
0402 Atmospheric Model Develop	21	1	22	163	6	169	173	4	214	-1	213	44	2,228
0403 Groundwater Transport	0	0	0	52	10	62	62	0	61	1	62	0	684
0404 Surface-Water Transport	9	5	14	84	10	94	100	6	132	-2	130	36	1,408
0405 Atmospheric Model Databas	10	0	10	100	3	103	61	-42	71	0	71	-32	940
0406 Atmospheric Model Calculat	0	0	0	0	0	0	15	15	31	-1	30	30	355
Subtotal Task 04	40	6	46	400	29	429	411	-18	509	-3	506	77	5,615
Task 05 - Environmental Monitoring Data													
0501 Tech Planning/Control/Rep	5	0	5	38	1	39	31	-8	38	0	38	-1	352
0502 Terrestrial Monitoring Data	13	0	13	62	1	63	60	-3	67	-1	66	3	621
0503 Enviromental Monitoring Dat	2	0	2	18	18	36	24	-12	46	-10	36	0	524
0504 Surface-Water Monitoring	1	0	1	17	-1	16	15	-1	15	0	15	-1	186
Subtotal Task 05	21	0	21	135	19	154	130	-24	166	-11	155	1	1,683
Task 06 - Demography, Food Consumption & Agriculture													
0601 Tech Planning/Control/Rep	2	0	2	31	1	32	34	2	41	0	41	9	461
0602 Food Consumpion	3	0	3	41	6	47	58	11	60	0	60	13	512
0603 Milk/Other Food Model Dev	21	3	24	112	6	118	190	72	337	-107	230	112	1,481
0605 Native American Data	4	0	4	18	59	77	64	-13	137	-57	80	3	134
Subtotal Task 06	30	3	33	202	72	274	346	72	575	-164	411	137	2,588

Table A.1. Cost Summary (Dollars in Thousands) (contd)

	July 1992			FY 1992 to Date (October 1991 - September 1992)									
	Labor $	Non-Labor $ (a)	Total $	Labor $	Non-Labor $ (a)	Total $	Cum(b) Planned	Cum Variance	TSP (c) Approved FY Budget	CDC (d) Negotiated Budget Adjustments	CDC (e) Contract FY Budget	Funds Remaining	Budgeted FY Labor Hours
Task 07 - Environmental Pathways & Dose Estimates													
0701 Tech Planning/Control/Rep	2	1	3	36	1	37	50	13	62	-1	61	24	618
0702 Path & Dose Code Dev/Doc	13	4	17	231	21	252	192	-60	240	1	241	-11	2,745
0703 Path & Dose Model Paramet	9	1	10	81	2	83	64	-19	75	-2	73	-10	798
0705 Dose Calculations	1	0	1	1	0	1	12	11	39	-16	23	22	247
Subtotal Task 07	25	6	31	349	24	373	318	-55	416	-18	398	25	4,408
Task 08 - Statistics													
0801 Tech Planning/Control/Rep	3	0	3	26	2	28	40	12	49	-1	48	20	388
0802 Stats Support for Tech Work	14	1	15	81	1	82	115	33	140	-2	138	56	1,234
0803 Analysis of Model Reliability	13	1	14	125	0	125	148	23	205	-1	204	[illegible]	1,932
Subtotal Task 08	30	2	32	232	3	235	303	68	394	-4	390	155	3,554
Task 09 - Records Management													
0901 Tech Planning/Control/Rep	2	0	2	15	0	15	13	-2	15	0	15	0	245
0902 Project Records Management	1	0	1	18	2	20	55	35	71	-1	70	50	1,667
Subtotal for Task 09	3	0	3	33	2	35	68	33	86	-1	85	50	1,912
Task 10 - Quality Assurance													
1001 Tech Planning/Control/Rep	0	0	0	13	2	15	11	-4	13	0	13	-2	146
1002 QA Program Development	4	0	4	13	0	13	15	2	17	1	18	5	245
1003 QA Verification	2	0	2	7	1	8	24	16	28	1	29	21	355
Subtotal Task 10	6	0	6	33	3	36	50	14	58	2	60	24	746

Table A.1. Cost Summary (Dollars in Thousands) (contd)

	July 1992			FY 1992 to Date (October 1991 - September 1992)									
	Labor $	Non-Labor $ (a)	Total $	Labor $	Non-Labor $ (a)	Total $	Cum(b) Planned	Cum Variance	TSP (c) Approved FY Budget	CDC (d) Negotiated Budget Adjustments	CDC (e) Contract FY Budget	Funds Remaining	Budgeted FY Labor Hours
Task 11 - Information Resources													
1101 Tech Planning/Control/Rep	1	0	1	32	1	33	37	4	44	-1	43	10	1,044
1102 Hanford Document Declass	3	0	3	42	0	42	47	5	51	1	52	10	1,179
1103 Hanford Info Resources Iden	3	2	5	52	5	57	60	3	63	6	69	12	1,141
Subtotal Task 11	7	2	9	126	6	132	144	12	158	6	164	32	3,364
Task 12 - TSP Communications Support													
1201 Tech Planning/Control/Rep	1	2	3	20	4	24	15	-9	17	0	17	-7	289
1202 TSP Public Outreach Support	0	0	0	1	3	4	8	4	20	-12	8	4	69
1203 Comm Assessment Research	0	0	0	4	0	4	11	7	12	0	12	8	134
1204 TSP Meeting/Material Sup	3	2	5	10	12	22	28	6	30	1	31	9	152
Subtotal - Task 12	4	4	8	35	19	54	62	8	79	-11	68	14	644
Subtotal, HEDR Project Tasks	**297**	**51**	**348**	**2,734**	**388**	**3,122**	**3,266**	**144**	**4,246**	**-292**	**3,954**	**832**	**44,644**

Table A.1. Cost Summary (Dollars in Thousands) (contd)

	July 1992			FY 1992 to Date (October 1991 - September 1992)									
	Labor $	Non-Labor $ (a)	Total $	Labor $	Non-Labor $ (a)	Total $	Cum(b) Planned	Cum Variance	TSP (c) Approved FY Budget	CDC (d) Negotiated Budget Adjustments	CDC (e) Contract FY Budget	Funds Remaining	Budgeted FY Labor Hours
Technical Steering Panel (g)	0	29	29	0	394	394	760	366	1,003 (h)	-85 (i)	918	524	0
Native American Research	0	0	0	0	9	9	285	276	356 (h)	0	356	347	0
TOTAL	297	80	377	2,734	791	3,525	4,311	786	5,605	-377	5,228	1,703	44,644

(a) Non-labor dollars include expenses such as travel, publication production, procurements, and subcontracts.
(b) The monthly planned amounts are given in the cost section of Figures 2, A.2, and A.3, pages xi, A.9, and A.10, respectively.
(c) "TSP approved FY Budget" is the approved FY 1992 budget from the FY 1992 Task Plans plus the allocation of FY 1991 carryover funds as approved in a letter from D. B. Shipler to J. E. Till, dated 11-19-91.
(d) Adjustments made to the TSP-approved budget, as negotiated by CDC for the contract with Battelle. This includes budget and scope reductions due to funding shortfall.
(e) "CDC Contract FY Budget" is the scope and budget CDC negotiated with Battelle. This includes a reduction to the FY 1992 budget and scope of $275K. This is a reconcilliation of DOE funds available and the TSP approved budget.
(f) Project management includes activities such as project control and administration, project communications, subcontract administration, records control, and peer review.
(g) TSP costs are administered through subcontracts which are reflected as non-labor costs. Actual TSP expenses include both labor and non-labor.
(h) FY budget provides funding through September 30, 1992. See Figures A.2 and A.3 for additional information. The FY budget includes FY 1991 carryover and PNL overheads applied to subcontracts.
(i) PNL costs and commitments incurred prior to June (CDC Contract) - To be negotiated between CDC and the TSP.

1. ID (Contract) Number:	2. Program/Project Title:	3. Reporting Period:
DE-AC06-76RLO 1830	HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION - TSP	JULY 1992

4a. Participant Name and Adress	4b. Client Name and Address	5. Start Date / 6. Completion Date
Pacific Northwest Laboratory P.O. Box 999 Richland, WA 99352	RL Richland, Washington 99352	5. Start Date OCTOBER 1991 6. Completion Date SEPTEMBER 1992

7. FY 92 | 8. Months

9. Cost Status

a. $ Expressed in: Thousands

b. B&R No./ Subaccount No.
12578
HR0120

c. FIN No.

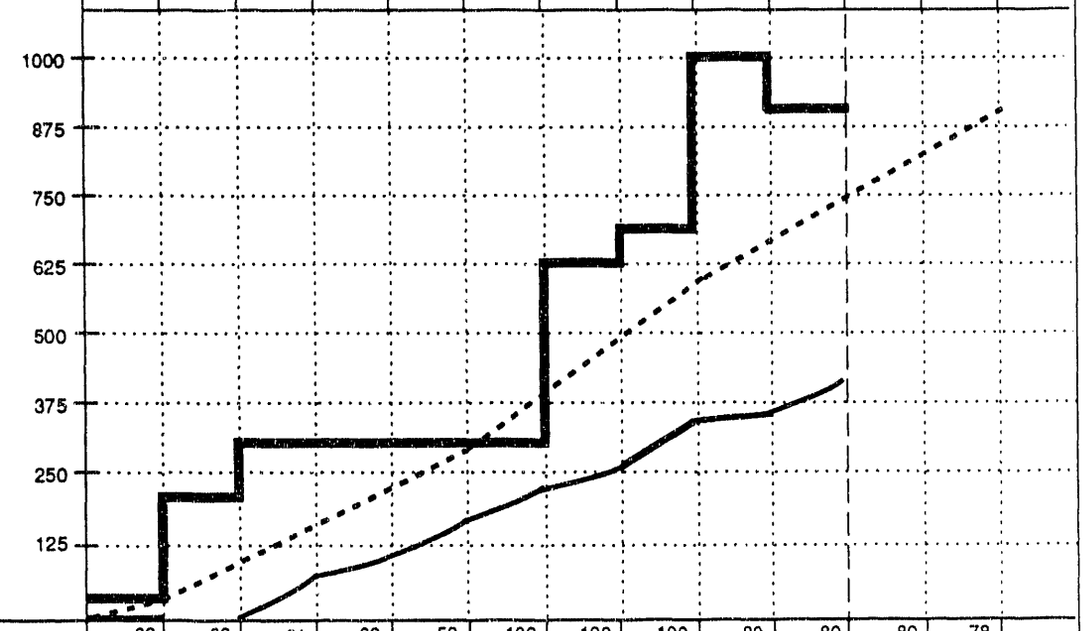
d. Actual Costs Prior Years
2,251

e. FY Budget
918 (a)

f. Total Budget

g. FY Funds Auth.
918 (b)

h. Total Funds Auth.
3,169 (c)



Costs	O	N	D	J	F	M	A	M	J	J	A	S	FY93
i. Planned	60	60	61	60	59	100	100	100	80	80	80	78	
j. Actual (d)	2	45	2	8	117	46	29	93	23	29			
k. Variance	58	15	59	52	-58	54	71	7	77	51			
l. Cum Planned	60	120	181	241	300	400	500	600	680	760	840	918	
m. Cum Actual (d)	2	47	49	57	174	221	250	342	365	394			
n. Cum Variance	58	73	132	184	126	179	250	258	335	366			

10. Legend: Planned - - - - - Actual ——— Funds Auth. ▬▬ 90% Funds Spent ⚐ Time Now

(a) Reduction in TSP budget to cover BNW costs and commitments incurred prior to June (CDC contract) - to be negotiated between CDC and the TSP. (b) Includes carryover and TSP's share of current fiscal year funding that has been received. (c) FY 88-92. (d) Actual costs are recorded after invoices are received and processed. Therefore, current month costs may not reflect actual work performed.

11. Name/Signature of Participants Prog/Proj Manager & Date

D. B. SHIPLER

Figure A.2. Technical Steering Panel Budget Status

1. ID (Contract) Number:	2. Program/Project Title:	3. Reporting Period:
DE-AC06-76RLO 1830	HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION - TRIBES	JULY 1992

4a. Participant Name and Adress	4b. Client Name and Address	5. Start Date / 6. Completion Date
Pacific Northwest Laboratory P.O. Box 999 Richland, WA 99352	RL Richland, Washington 99352	5. Start Date: OCTOBER 1991 6. Completion Date: SEPTEMBER 1992

7. FY 92 | 8. Months

9. Cost Status

a. $ Expressed in: Thousands

b. B&R No./ Subaccount No.: 12578 HR0120

c. FIN No.

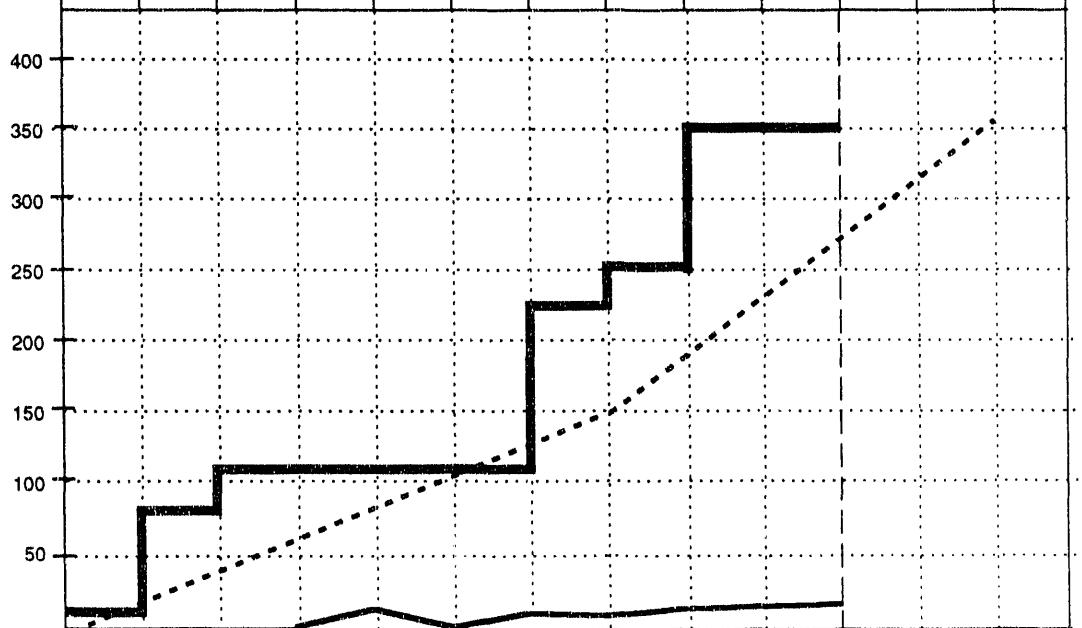
d. Actual Costs Prior Years (a)

e. FY Budget: 356K (b)

f. Total Budget

g. FY Funds Auth.: 356 (c)

h. Total Funds Auth.: 356 (d)



Costs		O	N	D	J	F	M	A	M	J	J	A	S	FY93
	i. Planned	22	22	22	22	22	35	35	35	35	35	35	36	
	j. Actual (e)	0	0	0	12	-14	7	-1	5	0	0			
	k. Variance	22	22	22	10	36	28	36	30	35	35			
	l. Cum Planned	22	44	66	88	110	145	180	215	250	285	320	356	
	m. Cum Actual (e)	0	0	0	12	-2	6	4	9	9	9			
	n. Cum Variance	22	44	66	76	112	131	176	206	241	276			

10. Legend: Planned - - - - - Actual ——— Funds Auth. ▬▬ 90% Funds Spent ⚐ Time Now

(a) Actual costs for prior fiscal years are part of the costs shown in Figure 2, HEDR Project Budget Status. At the direction of the TSP, Battelle is tracking Native American research costs separately, beginning in FY 92. (b) $356K = $275K for Native American research contracts, $19K of FY 1991 carryover funds, $37K for contingency and $25K for PNL overheads. (c) Includes carryover and Native American's share of current fiscal year funding that has been received. (d) FY 91 carryover plus FY 92 funds. (e) Actual costs are recorded after invoices are received and processed. Therefore, current month costs may not reflect actual work performed.

11. Name/Signature of Participants Prog/Proj Manager & Date

D. B. SHIPLER

Figure A.3. Native American Research Budget Status

Appendix B

Hanford-Site-Originated Documents of Potential Interest/Use in the HEDR Project - Placed in the RL Public Reading Room During July 1992

Appendix B

Hanford Site-Originated Documents of Potential Interest/Use in the HEDR Project - Placed in the RL Public Reading Room During July 1992

DUN-0031-RD	Reactor Operations Daily Report 11-1-65 Through 12-31-66. 242p.	11/01/6
DUN-1174-RD	Reactor Operations Daily Report 7-1-66 Through 6-30-67. 365p.	07/01/66
DUN-2634-RD	Reactor Operations Daily Report 7-1-67 Through 6-30-68. 366p.	07/01/67
DUN-4440-RD	Reactor Operations Daily Report 7-1-68 Through 8-31-68. 64p.	07/01/68
DUN-4579-RD	Reactor Operations Daily Report 9-1-68 Through 6-30-69. 305p.	09/01/68
DUN-5947	Reactor Operations Daily Report 7-1-69 Through 6-30-70. 367p.	07/01/69
HAN-80948	Reactor Branch Monthly Report January Through December 1962. 129p.	12/30/62
HAN-84213	Reactor Branch Monthly Report January Through December 1963. 136p.	12/30/63
HAN-87470	Reactor Branch Monthly Report January Through December 1964. 126p.	12/30/64
HAN-90620	Reactor Branch Monthly Report January Through December 1965. 300p.	01/01/65
HW-3-2661	Correlation Analysis of Water in 107-F. 6p.	06/23/45
HW-7-0589	Tolerance Levels. 1p	09/04/44
HW-12841	Assay of Horse Thyroid From the Sunnyside Area. 1p.	03/22/49
HW-13629	H.W. Particles. 3p.	06/09/49
HW-18385	A Review of Past Experiences with H.I. Survey Problems. 9p.	06/26/50
HW-19503	Progress Report for October, 1950 Chemical Research Section. 29p.	11/17/50

HW-19739	Progress Report for November, 1950 Chemical Research Section. 19p.	12/18/50
HW-27155-REV	Process Standards Reactor Cooling Water. 56p.	11/14/54
HW-28778	A Program for Testing Raw Columbia River Water as a Pile Coolant. 6p.	07/21/53
HW-29406	Production Test Number 105-525-E the Effects of Water Quality on Pile Operation. 7p.	09/21/53
HW-33200-DEL	Hanford Atomic Products Operation Monthly Report for September 1954. 363p.	10/25/54
HW-33585-DEL	Hanford Atomic Products Operation Monthly Report for October 1954. 351p.	11/24/54
HW-33962-DEL	Hanford Atomic Products Operation Monthly Report for November 1954. 351p.	12/20/54
HW-34196	The Corrosion of Hanford Fuel Elements - Method for the Treatment and Analysis of In-Pile Corrosion Data. 73p.	12/21/54
HW-35530-DEL	Hanford Atomic Products Operation Monthly Report for February 1955. 350p.	03/18/55
HW-36440-DEL	Hanford Atomic Products Operation Monthly Report for April 1955. 366p.	05/23/55
HW-36928-DEL	Hanford Atomic Products Operation Monthly Report for May 1955. 386p.	06/23/55
HW-37658-DEL	Hanford Atomic Products Operation Monthly Report for June 1955. 367p.	07/28/55
HW-39260-DEL	Hanford Atomic Products Operation Monthly Report for September 1955. 394p.	10/27/55
HW-39751-DEL	Hanford Atomic Products Operation Monthly Report for October 1955. 400p.	11/30/55
HW-40692-DEL	Hanford Atomic Products Operation Monthly Report for December 1955. 390p.	01/30/56
HW-41702-DEL	Hanford Atomic Products Operation Monthly Report for February 1956. 411p.	02/21/56

HW-43137-DEL	Hanford Atomic Products Operation Monthly Report for May 1956. 407p.	06/21/56
HW-44580-DEL	Hanford Atomic Products Operation Monthly Report for July 1956. 403p.	08/23/56
HW-44996	In-Reactor Corrosion of Aluminum. 22p.	02/18/57
HW-49826	IPD Monthly Record Report April 1957. 150p.	05/21/57
HW-50089-DEL	Chemical Processing Department Monthly Report for April 1957. 106p.	05/22/57
HW-50584-DEL	Chemical Processing Department Monthly Report for May 1957. 110p.	06/21/57
HW-51067-DEL	IPD Monthly Record Report June 1957.	07/19/57
HW-53299-DEL	Hanford Laboratories Operation Monthly Activities Report October 1957. 163p.	11/15/57
HW-53355-DEL	IPD Monthly Record Report October 1957. 145p.	11/20/57
HW-53449-DEL	Chemical Processing Department Monthly Report for October 1957. 103p.	11/22/57
HW-53961	Hanford Laboratories Operation Monthly Activities Report November 1957. 161p.	12/15/57
HW-53967-DEL	Chemical Processing Department Monthly Report for November 1957. 93p.	12/23/57
HW-54284	Hanford Laboratories Operation Monthly Activities report December 1957. 184p.	01/15/58
HW-54760-DEL	Hanford Laboratories Operation Monthly Activities Report January 1958. 164p.	02/15/58
HW-55101-DEL	IPD Monthly Record Report February 1958. 152p.	03/21/58
HW-55215-DEL	Chemical Processing Department Department Monthly Report February 1958. 93p.	03/21/58
HW-55571-DEL	Chemical Processing Department Monthly Report March 1958. 94p.	04/21/58

HW-56523	In-Reactor Corrosion of X-8001 and 1245 Aluminum-Analysis of Data from PT IP-42A. 40p.	06/25/58
HW-58661	Hanford Laboratories Operation Monthly Activities Report December 1958. 151p.	01/15/60
HW-58686	IPD Monthly Record Report For December 1958. 129p.	01/21/59
HW-59041	IPD Monthly Record Report for January 1959. 137p.	02/20/59
HW-59099	Hanford Laboratories Operation Monthly Activities Report January 1959. 161p.	02/15/59
HW-59456	IPD Monthly Record Report for February 1959. 130p.	03/20/59
HW-59463	Hanford Laboratories Operation Monthly Activities Report February 1959. 157p.	03/15/59
HW-59717	Hanford Laboratories Operation Monthly Activities Report March 1959. 175p.	04/15/59
HW-60233	Hanford Laboratories Operation Monthly Activities Report April 1959. 162p.	05/15/59
HW-60505	Hanford Laboratories Operation Monthly Activities Report May 1959. 163p.	06/15/59
HW-60846-DEL	Hanford Laboratories Operation Monthly Activities Report June 1959. 176p.	07/15/59
HW-60918	IPD Monthly Record Report June 1959. 116p.	07/22/59
HW-62864-DEL	Chemical Processing Department Monthly Report for November 1959. 62p.	12/21/59
HW-62900	IPD Monthly Record Report November 1959. 112p.	12/22/59
HW-64580-DEL	Hanford Laboratories Operation Monthly Activities Report March 1960. 166p.	04/15/60
HW-64991	Chemical Processing Department Monthly Report for April 1960. 56p.	05/20/60

PN-8123-HEDR	Methodology for Reconstruction of Historical Food Consumption Estimates. 27p.	05/15/92
PNL-8153-HEDR	Milk Production and Distribution in in Low-Dose Counties for the Hanford Thyroid Disease Study. 50p.	06/06/92
PNL-SA-20432 -HEDR	Decision Management for the Hanford Environmental Dose Reconstruction Project. 9p.	04/12/92
RL-REA-0345-RD	1965 Reactor Daily Report 1/1/65 Through 12/31/65. 300p.	01/01/65
RL-REA-0922	Preliminary Investigation of Water Coagulation Characteristics as Affects Reactor Effluent Radionuclides. 25p.	04/15/65

Appendix C

HEDR Documents to the TSP - July 1992

Appendix C

HEDR Documents to the TSP - July 1992

Title	Author	Date Issued	Publication No	Additional Information	Status
Summary of the March 25-26, 1991 Atmospheric Model Working Meeting	JV Ramsdell	7/92	PNWD-1975 HEDR	Presented at TSP meeting 4/91	Published final
Literature and Data Review for the Surface-Water Pathway: Columbia River and Adjacent Coastal Areas	WH Walters RL Dirkes BA Napier	4/92	PNL-8083 HEDR	Milestone 0404A	TSP comments received and being addressed by BNW
HEDR Modeling Approach	DB Shipler BA Napier	7/92	PNWD-1983 HEDR	Present at TSP meeting	Published final
Recommendations to the Technical Steering Panel Regarding Approach for Estimating Individual Radiation Doses Resulting from Releases of Radionuclides to the Columbia River, Vol. 1: Recommendation	BA Napier	7/92	PNWD-1977 HEDR	Milestone 0204B	Published final
Uncertainty and Sensitivity Analysis of Historical Measurements of Iodine-131 for Vegetation in 1945-1947	RO Gilbert	7/92	PNWD-1978 HEDR	Milestone 0802A	Published final
Radioactive Contamination of Fish, Shellfish, and Waterfowl Exposed to Hanford Effluents: Annual Summaries 1945-1972	RW Hanf RL Dirkes JP Duncan	7/92	PNWD-1986 HEDR	Phase I work	Published final
Media Information Review, January-June 1992	GL Harvey	7/92	PNWD-1992 HEDR	Milestone 1203C	Published final

Appendix D

HEDR Presentation Handouts to the TSP - July 1992

Appendix D

HEDR Presentation Handouts to the TSP - July 1992

Title	Author	Date Issued	Publication No	Additional Information
Status of Technical Work - Hanford Environment Dose Reconstruction Project - July 17, 1992	WH Walters	7/92	BN-SA-3565S HEDR	Presented at the TSP meeting. July 17, 1992, Astoria, OR
Status of Technical Work - Hanford Environment Dose Reconstruction Project - July 17, 1992	BA Napier	7/92	BN-SA-3564S	Presented at the TSP meeting, July 17, 1992, Astoria, OR

Appendix E

HEDR Open-Literature Publications and Presentations - July 1992

This appendix lists publications (new this month) that present aspects of dose reconstruction in the open scientific literature; TSP approval is not required. A complete listing for FY 1992 will be included in the September 1992 report.

Appendix E

HEDR Open-Literature Publications and Presentations - July 1992

Title	Author	Date Issued	Publication No	Audience	Status
Uncertainty Issues of the Hanford Environmental Dose Reconstruction (HEDR) Project	RO Gilbert JC Simpson	7/92	BN-SA-3576 HEDR	National Meeting of American Chemical and American Statistical Association, Washington, D.C.	To be presented August 1992
Uncertainty and Sensitivity Analysis of Historical Measurements of Iodine-131 for Vegetation in 1945-1947	RO Gilbert	7/92	BN-SA-3576 HEDR	1992 Joint Statistical Meetings, Boston, MA	To be presented August 1992

Appendix F

Communications Log - July 1992

Appendix F

Communications Log - July 1992

Initiated By/ Affiliation	Contact/ Affiliation	Type	Subject
B Aripa/Colville Tribe	TA Ikenberry/BNW	Phone	Status of work order for Colville contract
B Aripa/Colville Tribe	EB Liebow/BNW	Phone	Status of SOW review
WA Bishop/TSP	SM Finch/BNW	Phone	Native American budget
WA Bishop/TSP	EB Liebow/BNW	Phone	NAWG meeting requirements
WA Bishop/TSP M. Donnelly/CDC work	EB Liebow/BNW MS Power/TSP Staff	Phone	Status of work orders and CDC requirements, allocation of available funds; agenda for 7/15-16 meetings, Battelle's river pathways modelling recommendations
ML Blazek/TSP	GL Harvey/BNW	Phone	Response to J Till's comments on Revised 1992 Task Plan; Native American concerns
RF Brich/RL	DB Shipler/BNW	Phone	Presentation for the new Environmental, Safety, and Health Advisory Committee for DOE
T Burk/Pasadena, CA	GL Harvey/BNW	Phone	Columbia River pathway report
K CharLee/TSP Staff	SM Finch/BNW	Phone	Room rates and documents from meeting
K CharLee/TSP Staff	SP Gydesen/BNW	Phone	Single-request listing of documents and arrangements for G. Caldwell to review boxes
MD Freshley/BNW	MR Donnelly/CDC LE Sewell/CDC JE Till/TSP	Phone, Fax	Reconciliation of FY 1992 HEDR budget
N Geranius/AP	GL Harvey/BNW	Phone	Columbia River report
N Geranius/AP	BA Napier/BNW	Phone	Columbia River report
NJ Germond/TSP	S P Gydesen/BNW	Phone	Database of classified documents generated from 1961 - 1972 and document reviews by G Roessler and A Murphy

Initiated By/ Affiliation	Contact/ Affiliation	Type	Subject
FA Gifford/Air Model Review Panel, TSP	DB Shipler/BNW	Phone	Schedule for sensitivity/uncertainty meeting and RATCHET review
SP Gydesen/BNW	MA Robkin/TSP	Phone	Visit week of 7/20/92
SP Gydesen/BNW	NJ Germond/TSP	Phone	Single-request listing of document
K Hart/Environmental Health Newsletter	GL Harvey/BNW	Phone	Surface-water report (PNL-8083 HEDR)
GL Harvey/BNW	K Niles/TSP Staff	Phone	Call from L Lange to BA Napier
GL Harvey/BNW	K CharLee/ TSP Staff	Phone	Visits of TSP members to review documents and Columbia River pathway report (PNL-8083 HEDR)
R Hosker/National Oceanic and Atmospheric Administration	JV Ramsdell/BNW	Phone	Review of RATCHET code
P Houck/CDC	EB Liebow/BNW	Phone	Training needs and plans in coming 6 months
TA Ikenberry/BNW	WA Bishop/TSP	Phone	Native American contract, Colville contract status, future work for Colville, B Aripa's attendance at TSP meeting
TA Ikenberry/BNW	D Seyler/Coeur d'Alene	Phone, Fax	Coeur d'Alene work order proposal
TA Ikenberry/BNW	JR Wilkinson/Confederated Tribes of the Umatilla Indian Reservation	Phone, Fax	Umatilla work order proposal
H Jacques/T Fould's Law Office	WH Walters/BNW	Phone	River report references
PC Klingeman/TSP	WH Walters/BNW	Phone	Subcommittee meeting
L Lange/Seattle Pi	BA Napier/BNW	Phone	Columbia River report
EB Liebow/BNW	MR Donnelly/CDC	Phone	Schedule requirements for CDC/ Request for Proposal
EB Liebow/BNW	P Houck/CDC MR Donnelly/CDC V Chase/CDC MS Power/TSP Staff WA Bishop/TSP DE Walker/TSP B Amundson/HTDS	Phone	Standard protocol meeting
EB Liebow/BNW	V Pierre/Kalispel Tribe	Phone	Status of SOW review

Initiated By/ Affiliation	Contact/ Affiliation	Type	Subject
EB Liebow/BNW	MS Power/ TSP Staff	Phone	Format for progress reports
EB Liebow/BNW	D Rice/Army Corp of Engineers	Phone	Bibliographic references on fish consumption
AH Murphy/TSP	SM Finch/BNW	Phone	Status of invoice payment
BA Napier/BNW	DS Barth/TSP	Phone	Astoria TSP meeting
MA Neel/U.S. Nuclear Regulatory Commission	BA Napier/BNW	Phone	Availability of Columbia River report
K Niles/TSP Staff	GL Harvey/BNW	Phone	Declassification fact sheet
V Pierre/Kallspel Tribe	EB Liebow/BNW	Phone	Status report on SOW review
MS Power/TSP Staff	EB Liebow/BNW	Phone	Draft agenda for 7/15 meeting
JV Ramsdell/BNW	PC Klingeman/TSP	Phone	Direction for subcommittee meeting in Astoria and status report
GS Roessler/TSP	BA Napier/BNW	Phone	Meeting to discuss "value of information" techniques
GS Roessler/TSP	SP Gydesen/BNW	Phone	Visiting RL Public Reading Room week of July 20 - 24, 1992
GS RoesslerTSP	DH Denham/BNW	Phone	1950s reports by Herb Parker
MJ Sage/CDC	DB Shipler/BNW	Phone	Meeting with DOE in Astoria on 7/16/92. Out-year budget information. Extend Native American subcontracts.
DB Shipler/BNW	MJ Sage/CDC	Phone	Potential funding problem if extending the Native American subcontracts.
DB Shipler/BNW	LE Sewell/CDC	Phone	Reduction of unfunded budget; June costs; MR Donnelly is the key contact for project activities
DB Shipler/BNW	RF Brich/RL	Phone	Content of presentation for Environmental, Safety, and Health Advisory Committee
DB Shipler/BNW	JE Till/TSP	Phone	Results of Environmental, Safety, and Health Advisory Committee meeting; Perkin's work; Native American subcontracts; document status; FY 1993 budget; approval to combine Task Plans for contract period

Initiated By/ Affiliation	Contact/ Affiliation	Type	Subject
DB Shipler/BNW	MR Donnelly/CDC	Phone	Native American budget and commitments; realignment of FY 1992 funds
B Shleien/TSP	DB Shipler/BNW	Phone	June costs, FY 1992 and 1993 funding information
B Shleien/TSP	MD Freshley/BNW	Phone	FY 1992 HEDR budget
B Shleien/TSP	BA Napier/BNW	Phone	Status of stochastic version of GENII model
JC Simpson/BNW	E Hofer/Gesellschaft fuer Reaktorsicherheit GmbH, W Whicker/Savannah River Ecology Lab, T Kirschner/Col. State Univ., O Hoffman/Oak Ridge National Lab, S Hanna/Sigma Research Corp., W Dabberdt/National Center for Atmospheric Research, W Conover/Texas Tech Univ.	Fax	Postponement of sensitivity/ uncertainty review until January - February 1993
M Smith/Wash. Dept. of Ecology Library	KR Partridge/BNW AH McMakin/BNW	Phone	Explanation of "PNWD"
L Stivers/Richardson, TX	GL Harvey/BNW	Phone	TSP information
JP Thomas/Hanford Education Action League	BA Napier/BNW	Phone	Modeling of "hot particle" transport, effects of OMB approval requirements on HTDS calculations, calculation of doses from fish in Columbia River report, and recommendations to TSP on river modeling techniques
JE Till/TSP	GL Harvey/BNW	Phone	Astoria meeting media interaction
J Van Dyke/IBM	GL Harvey/BNW	Phone	Columbia River surface water report
M Yarbrough/Tennessee	BA Napier/BNW	Phone	HEDR use of database software and defining objectives of dose reconstruction

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