

CURRENT STATUS OF OPERABLE UNIT INVESTIGATIONS February 5-6, 1992

1100-EM-1 (EPA Lead, CERCLA Process)

This operable unit contains an equipment and vehicle maintenance area as well as a landfill. Radioactive contamination is not a concern here, but contamination with such substances as battery acid, antifreeze, and various solvents is known to exist. The Remedial Investigation/Feasibility Study (RI/FS) Work Plan was approved in September 1989.

Status:

The U.S. Environmental Protection Agency (EPA) and State of Washington Department of Ecology (Ecology) have approved a change request to revise the milestones for delivery of the RI Phase II Report and the FS Phase III Report for the 1100-EM-1 operable unit. The reports will be combined into an RI/FS report due to be delivered by the U.S. Department of Energy (DOE) to the regulators on December 31, 1992. The proposed plan will accompany the RI/FS report and will be made available for public comment prior to issuance of the Record of Decision.

During the last quarter, the 1100-EM-1 Supplemental Work Plan, Revision 1, was completed. Excavation of test pits and sampling of soils within the Horn Rapids Landfill were initiated. Quarterly soil gas sampling and the fourth quarter of groundwater sampling was completed in August. Additionally, the ecological investigation and report were completed.

200-BP-1 (EPA Lead, CERCLA Process)

The 200-BP-1 RI/FS operable unit is comprised of nine liquid cribs located in the northern portion of 200 East Area. This operable unit is the first of many operable units at Hanford that contain mixed radioactive and hazardous waste. Radioactive substances present in 200-BP-1 include cobalt, uranium, cesium, strontium, technetium, and plutonium. The principle hazardous substances of concern are cyanide and nitrate. Groundwater contamination attributed to 200-BP-1 has been observed in wells approximately two miles to the north between Gable Mountain and Gable Butte. At present, the extent of groundwater contamination is unknown, but it is known that concentrations of cobalt-60, technetium-99, cyanide, and nitrate exceed health based standards for drinking water. Due to this groundwater contamination, 200-BP-1 is considered a high priority operable unit. The 200-BP-1 RI/FS Work Plan was approved on March 16, 1990.

Status:

Phase I groundwater well drilling has been completed and quarterly sampling commenced. Drilling and sampling of the vadose zone underlying the nine cribs began in June 1991. The large scale aquifer test for well 699-53-55C has been completed. This test was one of the largest volume aquifer tests ever completed on the Hanford Site. Partial data has been received for the 45 of 51 radiological data sets, and is currently being validated. Partial wet

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chemistry data (49 of 57 samples) and volatile organic data (18 of 19 samples) has been received for second quarter groundwater sampling. Sampling for these groundwater wells are scheduled to begin semi-annual sampling in 1992. Field work for 200-BP-1 is currently suspended until vapor release issues related to tank farms are resolved.

200 Aggregate Area Management Strategy Reports

The Draft U Plant Aggregate Area Management Study Report (AAMSR) was transmitted for review and comment to EPA and Ecology on January 31, 1992. The report fulfills Hanford Federal Facility Agreement and Consent Order interim milestone M-27-02 for submittal of this AAMSR as a secondary document. The subject report, represents a scoping study of source waste management units in the U-Plant Aggregate Area as defined in the 1991 revision to the Tri-Party Agreement. This AAMSR is the first of ten reports that will be prepared under the Tri-Party Agreement major Milestone M-27-00.

300-FF-1 (EPA Lead, CERCLA Process)

Adjacent to the Columbia River, the 300-FF-1 operable unit is located in the northeastern part of the 300 Area. 300-FF-1 contains 19 waste units that include burial grounds, retention basins, and both active process liquid disposal trenches and inactive disposal ponds.

Status:

Vadose zone drilling and sampling activities commenced in September 1991. Geophysical survey work was initiated at the burial ground sites within the operable unit. Data interpretation is ongoing. Weather permitting, the first phase of field work will be completed by mid February 1992. A treatability test is planned for the summer in one of the inactive disposal ponds.

300-FF-5 (EPA Lead, CERCLA Process)

The 300-FF-5 operable unit consists of the groundwater and sediments beneath the 300-FF-1, 300-FF-2, and 300-FF-3 operable units. This operable unit represents the major pathway for contaminants to be transported from the 300-FF-1, 2, and 3 operable units to the Columbia River.

Status:

Groundwater well drilling activities have been completed. One round of groundwater samples were taken in December 1991.

100 Area Studies and Past Practices Strategy

Status:

The negotiations between the regulators and the U.S. Department of Energy Field Office, Richland (RL) continued during the quarter. In conjunction with the regulators, RL has rescoped the first 11 Work Plans within the 100 Area, and Westinghouse Hanford Company is currently rewriting the Work Plans to align work with the new strategy.

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Drilling activities for vadose zone boreholes and groundwater wells are currently underway in 100-DR-1, 100-HR-1, and 100-HR-3 operable units. Non-intrusive field investigations at 11 operable units within the 100 Areas, including spring seep studies, will continue. Risk assessment methodologies development, groundwater and soils background studies, and river aquifer interaction studies will all continue. The Risk Assessments Codes and Models Methodology document was issued and is currently under regulatory review. Non-intrusive 100 Area wide investigation continues on schedule.

100-KR-1 and 100-KR-4 (EPA Lead, CERCLA Process)

The 100-KR-1 operable unit consists of the major liquid disposal units in the 100-KE and 100-KW reactor areas, including the "mile-long K trench". The 100-KR-4 operable unit consists of the groundwater and sediments beneath the 100-K areas.

Status:

Comments from the EPA and Ecology on the rescoped RI/FS workplans were submitted to the Department of Energy on January 31, 1992. Cultural resource reviews and field investigations are complete. Data compilation is completed for geology, hydrology, and ecology.

100-BC-1 and 100-BC-5 (EPA Lead, CERCLA Process)

The 100-BC-1 operable unit contains the major liquid disposal sites that services the 100-B reactor, while the 100-BC-5 operable unit corresponds to the extent of contaminant in the groundwater and surface water influenced by all sites in the 100-BC Area. The 100-BC Area is located on the Columbia River approximately 3 miles downstream from the Vernita Bridge.

Status:

The rescoped RI/FS work plans for 100-BC-1 and 100-BC-5 are currently in the comment resolution stage. All comments are expected to be resolved by mid February. Final approval of these work plans is expected to occur in mid April.

Non-intrusive PCB sampling for electrical facilities associated with B and C area was conducted in December. Well drilling activities are scheduled to begin in March.

100-HR-1 (Ecology Lead; RCRA Process)

This operable unit is located in the 100 Area, in the north-central part of the Hanford Site. It includes cribs, trenches, burial grounds and evaporation basins. These waste management units have received wastes from the following activities: process liquid waste transfer, treatment and disposal; reactor exhaust stack emissions; radioactive solid waste disposal, sanitary wastes transfer treatment and disposal; and N Reactor fuel fabrication liquid process waste treatment and storage. This unit also includes the H Reactor.

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Contaminants of concern include radioactive substances, metals, non-metallic ions, and volatile organic compounds. There is confirmed soil and groundwater contamination with substances including: radionuclides, chromium, copper, lead, and tetrachloroethylene.

Status:

The rescoped Work Plan was submitted to the regulators on October 2, 1991. Ecological field investigations were completed. Planning for intrusive drilling activities were initiated during the last quarter. Drilling is scheduled to be initiated during the second quarter of FY 1992.

100-HR-3 (Ecology Lead, RCRA Process)

This "groundwater" operable unit is located in the north-central area of the Hanford Site. Investigations at this unit will provide a regional assessment of groundwater, surface water, sediments and biota associated with the 100-HR-1, 100-HR-2, 100-DR-1, 100-DR-2, 100-DR-3 and 100-IU-4 Operable Units.

Remedial investigations will be conducted with a focus on near-term identification of those areas requiring interim actions in order to abate existing or potential threats to the public health or the environment.

Status:

The rescoped Work Plan was submitted to the regulators on September 30, 1991. The source data report has been completed. Surface water and sediment sampling was initiated in September. Drilling for installation of groundwater monitoring wells is scheduled to begin in early October 1991.

100-DR-1 (Ecology Lead, RCRA Process)

This operable unit is also located in the 100 Area, in the north-central part of the Hanford Site. It includes numerous facilities associated with liquid waste disposal operations. These facilities include cribs, trenches, liquid storage basins, retention basins, process effluent pipelines, contaminated reactor ancillary facilities, sanitary wastes facilities, and many support facilities such as solvent storage tanks. This unit also includes the RCRA-regulated 100-D ponds, and the D Reactor.

These waste management units have received process liquid waste and sludge; reactor exhaust stack emissions; radioactive and non-radioactive solid wastes, hazardous wastes, other liquid wastes and sanitary wastes. Contaminants of concern include radioactive substances, corrosive chemicals, petroleum products, solvents, PCBs and metals. There is confirmed soil and groundwater contamination with substances including: radionuclides, chromium, and copper.

Status:

The rescoped Work Plan was submitted to the regulators on September 30, 1991. Ecological field investigations were completed. Drilling is scheduled to begin in early October 1991.

100-NR-1 and 100-NR-3

Status:

The draft Work Plans have been rescoped through negotiations with the regulators. The Work Plans are currently being rewritten and will be issued to the regulators on December 31, 1991.

100-FR-1 and 100-FR-3

Status:

EPA and Ecology supplied comments on the 100-FR-1 source operable unit and the 100-FR-3 groundwater operable unit RI/FS work plans to the Department of Energy on January 30th, 1992.

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