

## **13.0 LIQUID EFFLUENT TREATMENT AND DISPOSAL**

### **13.1 LIQUID EFFLUENT DISCHARGE RESTRICTIONS**

#### **13.1.1 Introduction**

This section addresses requirements for management of restrictions for discharge of liquid effluents to the soil column at Hanford. These managerial requirements are the result, in part, of EPA's and Ecology's reviews of the Liquid Effluent Study (LES) that was submitted by DOE in August 1990. The LES included information on the 33 Phase I and Phase II liquid effluent streams and was conducted outside the scope of this Agreement. However, the parties agreed that information obtained through the LES would be considered new information (see Paragraph 136 of the Agreement) and that such new information could form the basis for reevaluation of the liquid discharge milestones in the Agreement. The liquid effluent discharge milestones are covered in M-17-00.

The purpose of this section is to describe the process which will be followed for establishing additional milestones related to the operation, treatment, and disposal of all 33 Phase I and Phase II liquid effluent discharges to the soil column and to explain the general guidelines to be followed in the establishment of additional milestones. The initial requirements and restrictions contained herein address the seven streams identified by EPA as high priority, as well as five streams associated with the PUREX facility. The parties agree that such requirements and restrictions are necessary to provide near-term assurance that all reasonable steps are being taken to minimize environmental degradation. The long-term solutions are to establish stream specific milestones leading to establishment of treatment processes or ceasing discharges altogether and finally, to regulate any remaining discharges to the soil column through provisions of the State of Washington Waste Discharge Permit Program (WAC-173-216 or, if applicable, WAC-173-218).

#### **13.1.2 State Waste Discharge Permits**

The Parties agree that those waste water streams currently discharged to the soil column or any future waste water streams (excluding discharges that are exempt from permitting under Section 121 of CERCLA) discharged to the soil column, which affect groundwater or which have the potential to affect groundwater, shall be subject to permitting under RCW 90.48.160, WAC 173-216, or if applicable, WAC 173-218. While the administration of these provisions of state law will be conducted outside this Agreement, Ecology intends to maintain consistency with this Agreement in implementing the state water quality program at the Hanford Site. Ecology and DOE agree to negotiate a separate agreement by September 1991 or such later date as the Parties agree upon, which will provide a schedule for obtaining permits and all necessary actions leading to obtaining such permits pursuant to these provisions of state law at the Hanford Site. While DOE is agreeing to Ecology's authority to implement a permit program under RCW 90.48.160 and WAC Chapter 173-216 for liquid effluents discharged to the soil column which affect or have the potential to affect groundwater at the Hanford Site, DOE reserves any rights and defenses under state and federal law in any enforcement or permitting activity including the right to appeal such permits to the appropriate

tribunal and to raise any objection whatsoever to such permits except that DOE will not challenge Ecology's authority to administer the WAC Chapter 173-216 permit program at the Hanford Site.

### **13.1.3 Liquid Effluent Discharge Milestones and Negotiations**

The Parties will also negotiate additional interim and final milestones to be included in this Agreement addressing, without limitation, waste reduction, interim and final treatment, and/or termination of the 33 Phase I and Phase II streams. These negotiations will be completed by September 1991. Negotiated milestones will be included in the 1992 Annual Update to the Work Schedule (Appendix D).

The Parties are agreeing now to the addition of certain interim milestones (M-17-11, M-17-12, and M-17-13) in Milestone M-17-00. These milestone requirements relate to interim or final remedial actions which will be taken at Operable Units affected by those discharges. The specific descriptions of these milestone requirements are set forth in Appendix D of this Agreement, Tables D-4 and D-5.

### **13.1.4 Sampling and Analysis Plans**

DOE will develop a stream specific sampling and analysis plan (SAP) for the Phase I and Phase II streams which continue to discharge to the soil column as specified in Appendix D, Table D-4. These SAPs shall be subject to approval of EPA and Ecology and will include an implementation schedule. The SAPs must provide for representative sampling of wastes discharged to the soil column, accounting for significant variations in volumes and contaminant concentrations due to operational practices. The frequency of sampling will vary, depending on the consistency or trends established for each stream over time. The SAPs will consider all of the parameters known or suspected to be associated with each liquid effluent stream with consideration given to the influence of operational practice, raw water characteristics, and process knowledge in developing contaminant analysis requirements. DOE will sample and analyze each stream in accordance with the approved sampling and analysis plan. The timing for development of each SAP will be specified on the appropriate M-17-00 milestone as set forth in Appendix D, Table D-4.

### **13.1.5 Assessment of Environmental Impact of Continuing Liquid Discharges**

DOE will develop a methodology for assessing the impact of all discharges (including both active and proposed) on groundwater at the disposal sites. This methodology will rely on available data, additional liquid effluent sampling, analytical results supplied under Section 13.1.4, and optimal management practices. DOE shall submit this methodology to EPA and Ecology for approval. Within 30 calendar days after notification of approval of the methodology, DOE shall submit a schedule for the completion of the assessments for each of the 33 Phase I and Phase II effluent streams which will continue beyond June 1992.

### **13.1.6 Stream Specific Requirements and Restrictions**

The Parties agree that interim operating restrictions are necessary to provide near-term assurance that all reasonable steps are being taken to minimize environmental degradation while negotiations and follow on actions are pursued. The twelve high-priority streams and the interim operating restrictions to be implemented for each of those streams are identified in Appendix D, Table D-5.