

Executive Summary for Hanford Federal Facility Agreement and Consent Order Action Plan

This Action Plan is an attachment to the *Hanford Federal Facility Agreement and Consent Order* (hereafter referred to as the “Agreement”) between the U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), and the State of Washington Department of Ecology (Ecology). The Agreement is the legal document that binds DOE to actions to comply with the *Resource Conservation and Recovery Act* (RCRA), the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA), and the State of Washington *Hazardous Waste Management Act* (HWMA).

The Hanford Site

The Hanford Site was acquired by the Federal Government in 1943 for the construction and operation of facilities to produce plutonium for World War II. The site encompasses approximately 560 square miles within the Columbia River Basin. For over 20 years, Hanford facilities were primarily dedicated to the continuation of plutonium production for national defense and managing the wastes generated. In later years, programs at Hanford have become increasingly diverse, involving research and development for advanced reactors and renewable energy technologies. DOE has phased out the defense production missions of Hanford. The current emphasis of the Site is cleanup of waste units resulting from past operations, achieving compliance with Federal and State laws, and research and development.

Treatment, Storage and Disposal Operations

The Hanford Site has and will continue to provide for the Treatment, Storage and Disposal of hazardous and mixed wastes. Mixed wastes are those which contain both hazardous waste (i.e., chemical) and radioactive waste.

In 1984, Congress amended RCRA, imposing, among other things, additional restrictions on hazardous waste storage and disposal activities. The analogous HWMA imposes similar restrictions. These restrictions have been referred to as the Land Disposal Restrictions (LDR). Some of the mixed wastes which are stored at Hanford are subject to LDR and cannot be land disposed until the wastes are treated in accordance with LDR regulations, or a variance is granted. These wastes are stored in underground tanks or in other mixed waste units.

At present, DOE does not have the capability to treat all of the LDR mixed wastes at Hanford in accordance with LDR, and until such treatment occurs, disposal is prohibited. The mixed waste treatment systems which are currently available and treatment systems which are planned for the future must satisfy prescribed LDR treatment requirements. Until treatment systems capable of treating the mixed waste to meet the LDR treatment standards become available for Hanford wastes, storage of existing wastes and wastes which will be generated will continue. However, such storage will be in accordance with an approved plan for the management of LDR mixed waste.

In addition to restrictions on land disposal, these LDR requirements also include specific conditions for storage of LDR wastes. The DOE will submit schedules to develop and construct waste treatment systems necessary to achieve compliance with LDR storage requirements, which shall become effective upon approval by Ecology.

Treatment, Storage or Disposal (TSD) Groups/Units on the Hanford Site (see Appendix B) must be permitted and/or closed in accordance with the State of Washington HWMA. The State of Washington administers and enforces its hazardous waste program in lieu of the Federal program, as authorized by EPA. A group represents one or more TSD units and reflects the level at which a Part B application and/or closure plan will be developed. These units range significantly in complexity from the closure of the single-shell tanks to the permitting of an individual treatment tank within a production facility. Ecology has the primary authority for issuing a final operating permit to the DOE. Until such time, the DOE continues to operate its TSD units under interim status regulations.

Past-Practices

As previously noted, the Hanford Site has been in operation since the mid-1940s. These operations resulted in numerous past-practice units (see Appendix C) that must be investigated and, if necessary, cleaned up. A past-practice unit is a waste management unit where wastes have been disposed (intentionally or unintentionally), and that is not subject to regulation as a TSD Unit.

The majority of the past-practice units on the Hanford Site contain mixed wastes (i.e., wastes containing both radioactive wastes and hazardous wastes). The remaining units contain only radioactive wastes or hazardous wastes, or are considered non-radioactive and non-hazardous. A large percentage of these waste units are either solid waste burial grounds or liquid disposal units, such as cribs, ponds, and ditches.

The groundwater beneath the Hanford Site has been contaminated as a result of these past-practices. Current data show tritium and nitrate to be the most widespread contaminants in the groundwater. Chromium, cyanide, and carbon tetrachloride are some of the hazardous chemicals which have been detected in the groundwater near operating areas.

Regulatory Authorities

Resource Conservation and Recovery Act

RCRA was enacted by Congress in 1976. It requires “cradle to grave” management of hazardous waste by all generators, transporters, and owners/operators of treatment, storage, and disposal facilities handling hazardous wastes. A major goal of RCRA is to reduce the generation of hazardous waste.

The Department of Ecology has the authority to carry out the RCRA Program in Washington through its own dangerous waste management program. Washington State regulations for dangerous waste management are substantially similar to, but more restrictive in some cases than, the RCRA regulations.

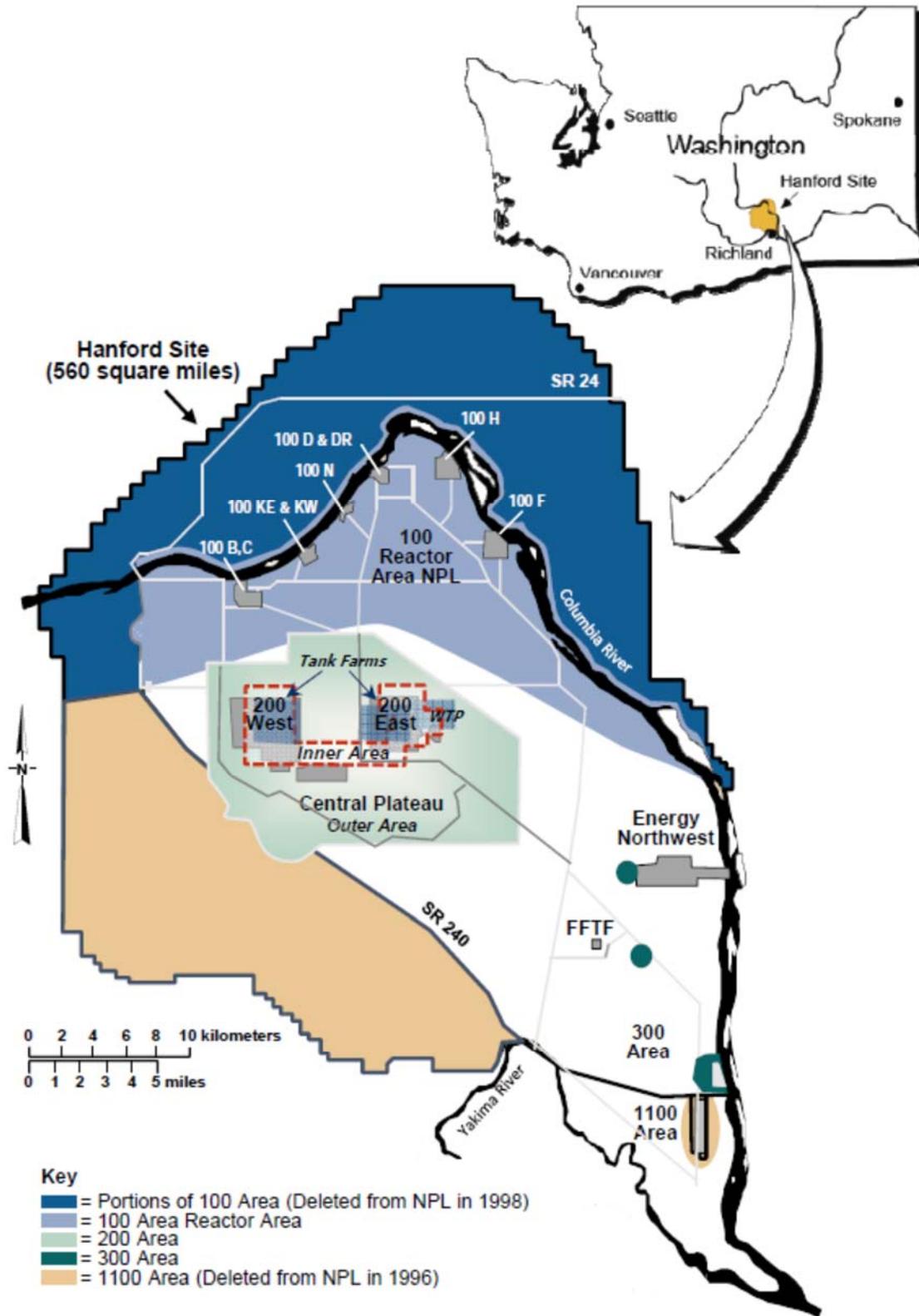
The State of Washington has received authorization to carry out a portion of the *Hazardous and Solid Waste Amendments of 1984* (HSWA) including corrective actions. For that portion, Ecology's authorized program operates in lieu of the Federal requirements. However, some HSWA provisions are yet to be delegated to the state, and the EPA retains authority to implement those provisions. HSWA provides for corrective action at all waste management units, irrespective of the date wastes were placed in the units.

Comprehensive Environmental Response, Compensation and Liability Act

CERCLA, also referred to as "Superfund", was enacted by Congress in 1980. Its purpose is to provide both funding and enforcement authority for cleaning up contaminated waste sites that have been created over the past decades. The funding portion of CERCLA does not apply to Federal facilities such as Hanford. EPA has been given authority for carrying out the provisions of CERCLA.

A key element for application of the cleanup provisions of CERCLA is the listing of a site on the National Priorities List (NPL). A Preliminary Assessment/Site Inspection (PA/SI) was completed in 1987 for the Hanford Site. On June 24, 1988 the EPA nominated four areas of the Hanford Site for inclusion on the NPL based on the results of the PA/SI. These four areas were officially listed on the NPL on November 3, 1989 (54 FR 41015, October 4, 1989). These are the 100 Areas, 200 Areas, 300 Area, and 1100 Area as shown on the following map of the Hanford Site. The 1100 Area has since been remediated and deleted from the NPL (61 FR 51019, September 30, 1996). In addition, portions of the 100 Area underwent partial deletion (63 FR 36861, July 8, 1998).

The Hanford Site



Federal Facility Agreement and Consent Order

The Agreement is the legal document covering Hanford Site environmental compliance and cleanup. The general purposes of the Agreement are:

- To ensure that the environmental impacts associated with past and present activities at the Hanford Site are thoroughly investigated and that appropriate response actions are taken as necessary to protect the public health, welfare, and the environment;
- To provide a framework for permitting TSD units and to promote an orderly, effective investigation and cleanup of contamination at the Hanford Site;
- To ensure compliance with RCRA and the Washington Hazardous Waste Management Act for TSD units including requirements covering permitting, interim status, land disposal restrictions, closure, and post-closure care;
- To establish a procedural framework for developing, prioritizing, implementing, and monitoring appropriate response actions at the Hanford Site in accordance with CERCLA, the National Contingency Plan (NCP), Superfund guidance and policy, and RCRA guidance and policy;
- To facilitate cooperation, exchange of information, and the coordinated participation of the parties in such actions; and
- To minimize the duplication of analysis and documentation.

The Legal Agreement contains five parts: Part One contains introductory provisions; Part Two contains provisions governing hazardous waste treatment, storage, and disposal, facility compliance, permitting, closure, and post-closure activities; Part Three contains provisions governing remedial and corrective action activities; Part Four addresses the regulatory interfaces between EPA and the Ecology; and Part Five provides common provisions which apply to both Parts Two and Three. In addition, the Agreement delineates authorities, identifies enforcement provisions and provides for dispute resolution among the parties. This Action Plan is an attachment to the Federal Facility Agreement and Consent Order.

Action Plan

This Action Plan, as an enforceable part of the Agreement, provides the methods and procedures, and establishes the plans for (1) compliance, permitting, and closure under RCRA and the Washington State Hazardous Waste Management Act, and (2) cleanup of the Hanford Site under CERCLA and RCRA corrective action provisions.

Major Milestones

The master plan and schedules for Action Plan work are found in Section 2.0, Milestones. These major milestones contain enforceable commitments for the most significant actions in the Action Plan, including:

- Closure of the Hanford single-shell tanks and final disposal of all tank wastes;
- Investigation and cleanup of all contamination at operable units;
- Permitting and closure of treatment, storage, and disposal units;
- Ceasing disposal of all contaminated liquids to soils; and
- Operation of the High-Level Waste Vitrification Plant.

Unit Identification, Categorization, and Prioritization

The TSD groups on the Hanford Site identified in Appendix B are those that are permitted to continue operation. The TSDs are subject to closure requirements under the HWMA. Actions associated with these TSD groups have been prioritized on the work schedules based on (1) the risk to public health and environment, (2) benefits received in minimizing wastes in terms of volume and toxicity, and (3) operational considerations.

Past-practice units are identified in Appendix C. They have been grouped into operable units for the purposes of investigation and cleanup. An operable unit is a grouping of individual waste units based primarily on geographic area and common waste sources. The operable units are prioritized for investigation based on an initial assessment of environmental risk potential. The assessment considers waste volume, hazardous substances and their toxicity or health effects, and the potential for migration of these substances.

Project Managers

EPA, DOE, and Ecology have designated individuals who will serve as project manager who will have the primary responsibility for all activities to be carried out in regard to their assigned operable unit, TSD group/unit or milestone under the Action Plan.

Project managers will hold monthly meetings, unless the Parties agree otherwise, concerning their respective areas of responsibility. These meetings will address status and problem areas. The goal is to maximize communication among the three parties.

Integration of RCRA and CERCLA

RCRA and CERCLA overlap in many areas. RCRA and CERCLA both require corrective action for releases regardless of time of release. RCRA regulated wastes are also regulated under CERCLA. Many of the RCRA disposal units on the Hanford Site which are scheduled for closure are located in close proximity to past-practice units. These TSD units have been incorporated into the appropriate operable unit with the past-practice units so that integrated investigation and cleanup actions result. These TSD units will be closed under the authority of RCRA, generally in coordination with the past-practice activities. In order to streamline the

interface between RCRA and CERCLA authorities within an operable unit, the past-practice units contained within an operable unit will all be designated as either CERCLA units or as RCRA corrective action and CERCLA units.

Lead Regulatory Agency Concept

Legal authority for regulatory oversight of DOE's actions may rest with either EPA, Ecology, or a combination of EPA and Ecology. The involvement of both EPA and Ecology throughout completion of a particular milestone, however, is in most cases not an efficient process for regulatory oversight. Therefore, EPA and Ecology will use a "lead regulatory agency" approach to minimize duplication of effort and maximize productivity. In most cases, either EPA or Ecology will be the lead regulatory agency for an operable unit, TSD group/unit or milestone. The non lead regulatory agency will not assign staff to oversee work regarding that operable unit, TSD group/unit or milestone even though it may have legal authority to do so. Staff from the lead regulatory agency will manage all aspects of regulatory oversight, which are covered by this Agreement, on their assigned operable units, TSD groups/units or milestones, including preparation of decision documents and briefings to senior management of the non lead regulatory agency where final approval by the non lead regulatory agency is required. The decision of which agency is lead for each operable unit, TSD group/unit or milestone will be jointly made by EPA and Ecology.

RCRA Permitting

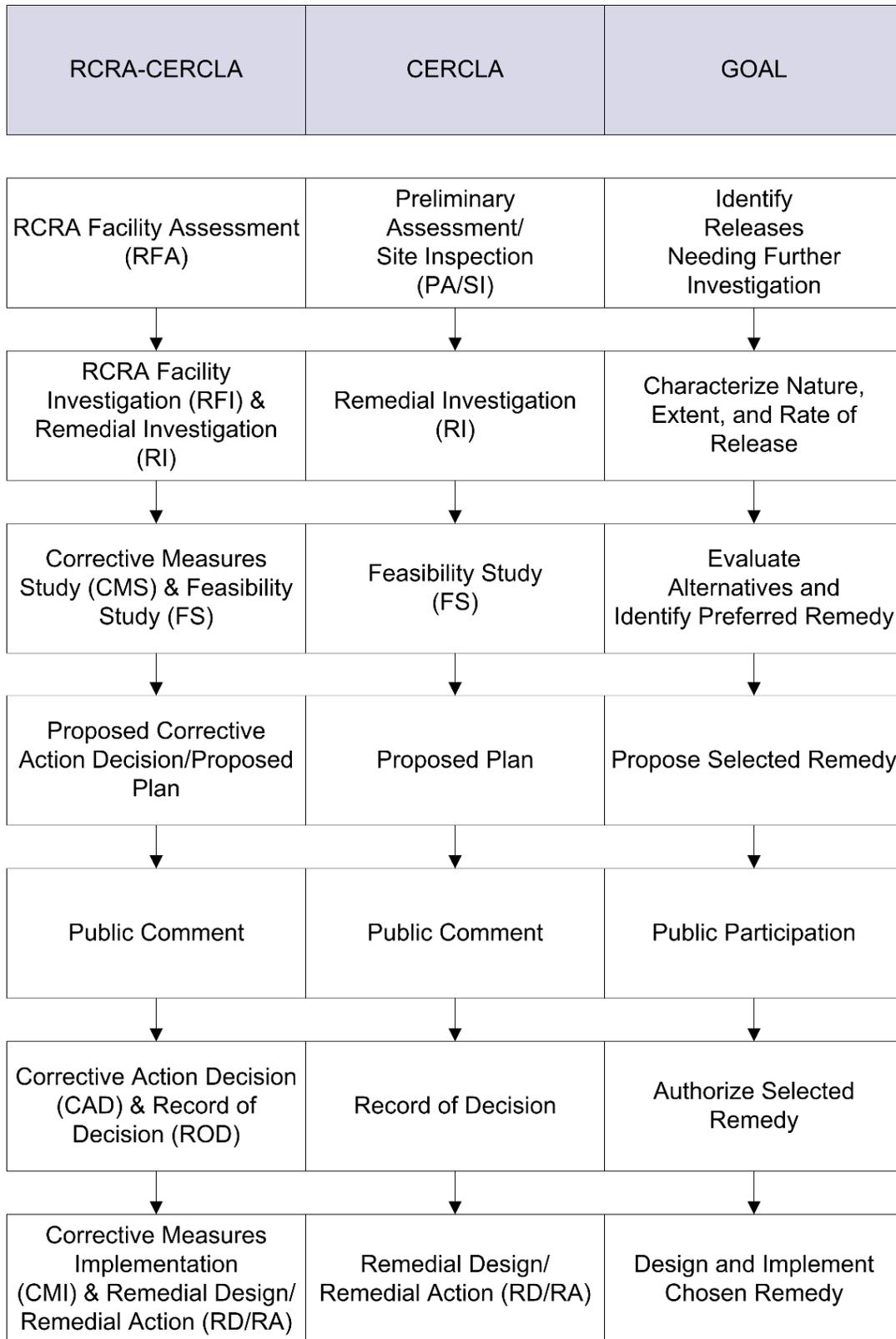
Since the Hanford Site is designated as a single RCRA facility one hazardous waste permit will be issued and maintained, and will address the treatment, storage and disposal of hazardous wastes. The initial permit will be issued for less than the entire facility, recognizing that not all of the TSD groups will be ready for a permit at the same time. Then the permit will be modified over time to incorporate additional TSD groups. The permit will also incorporate the cleanup actions selected for those past-practice units addressed under RCRA corrective action provisions. The permit will also address post-closure care requirements for those TSD units which have been closed, including those closed in conjunction with a past-practice operable unit.

Remedial and Corrective Action

Either the CERCLA remedial action, or both the RCRA corrective action and CERCLA remedial action processes will be used for the past-practice operable units. Under either approach, DOE will investigate the contamination at the operable unit and study alternatives for cleaning up the problem. Following a public comment period, the appropriate regulatory agency will select the remedy. The following figure summarizes these processes, and shows that they are functionally equivalent.

A work plan will be developed for each operable unit that will address all activities from the start of field investigation through the proposed selection of a remedy for cleanup. The documentation of the selected remedy will be made available for public comment.

Appendix D provides the definitive work schedule which reflects specific dates for activities in support of the major milestones.



Documentation and Administrative Record

All documents will be categorized as either primary or secondary documents. Primary documents represent the interpretation of key data and reflect decisions on how to proceed. Secondary documents represent an interim step in a decision making process, or are issued for information only and do not reflect key interpretations. Only primary documents are approved by the regulatory agencies and can be subjected to the dispute resolution process detailed in the Agreement. All documents (including secondary documents) will be reviewed by the regulatory agencies. The specific processes for document review, comment, and revision are contained in the Action Plan.

An Administrative Record will be established for each operable unit and TSD group, and will contain all of the documentation considered in arriving at a CERCLA decision, corrective action decision or RCRA permit modification. The administrative record files will be available to the public for review by internet at www.hanford.gov and during normal business hours at the following location:

- Hanford Administrative Record
2440 Stevens Center
Room 1101
Mail Stop: H6-08
Richland, Washington 99352

The State of Washington is responsible for assembling and maintaining the official RCRA Permit Administrative Record. The RCRA Permit Administrative Record Requirements are pursuant to WAC 173-303-840(2)(e), and not this agreement. The RCRA Permit Administrative Record is available to the public for review during normal business hours at the following location:

- Department of Ecology
3100 Port of Benton Blvd
Richland, Washington 99354

Action Plan Publication

An updated version of the Action Plan will be published periodically as agreed upon by the three parties.

Community Relations

Section 10.0 of this Action Plan summarizes the community relations activities in support of the Agreement. A separate Community Relations Plan, now known as the Public Involvement Plan (PIP) has been developed that meets the requirements for having such a plan at NPL sites, and also supports all the community relations needs of the Agreement, including RCRA public involvement requirements.

The following summarizes the key elements of the PIP:

- Public information repositories will be maintained in Seattle, Richland, and Spokane, Washington, as well as Portland, Oregon. Documents, during the appropriate public comment period, will be placed in the public information repositories.
- At least one public information meeting on the DOE budget formulation will be held in the spring, or on a date agreed to by the Parties based on the availability of budget information. An optional meeting may be held in the fall.
- Key decision documents will be made available for public comment prior to being finalized. Public meetings concerning these documents will be held as appropriate. Public hearings will be held upon request for draft permits or permit modifications, to meet HWMA requirements.
- Changes to the Agreement, Action Plan, work schedule and other appendices will be subject to public comment based upon the significance of the pending change, as defined in the PIP.
- An active system of keeping the public informed will be implemented. A mailing list will be maintained for distribution of fact sheets and other mailings.
- A federal technical assistance grant program will be administered by EPA and a public participation grant program will be administered by Ecology.
- Interested Indian Tribes will be afforded special meetings and direct distribution of key documents upon request.

The intent is to involve the public extensively concerning environmental compliance and cleanup of the Hanford Site.

Current Status of Activities at Hanford

Current status of activities addressed by the Agreement may be obtained from the status reports which are produced as a requirement of this Agreement. These reports are available for inspection at any of the four Information Repositories described in section 10.2 of this action plan. Current status is also provided through regular and special mailings from the three parties. Any person may be placed on the Hanford Site mailing list by contacting any of the community relations contacts shown in Appendix E of this action plan. The Public Information Meeting and other special public involvement meetings held in various locations in Washington and Oregon are also a source of current information. These meetings are announced via newspapers and direct mail notices to those on the Hanford Site mailing list.