

Hanford Site Guide for Preparing and Maintaining Generator Group Pollution Prevention Documentation

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200



**United States
Department of Energy**
P.O. Box 550
Richland, Washington 99352

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B.G. Place
Fluor Hanford

Date Published
November 2000

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**United States
Department of Energy**

P.O. Box 550
Richland, Washington 99352

Christine Willingham 11-27-00
Release Approval Date

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ABSTRACT

This document provides guidance to generator groups for preparing and maintaining documentation of Pollution Prevention/Waste Minimization (P2/WMin) Program activities. The guidance is one of a hierarchical series that includes the *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan* (DOE-RL, 2000) and Prime Contractor implementation plans describing programs required by *Resource Conservation and Recovery Act of 1976* (RCRA) 3002(b) and 3005(h) (RCRA and EPA, 1994) and Department of Energy Acquisition Regulations (DEAR) (48 CFR 970.5204-2 and 48 CFR 970.5204-78). Documentation guidance for the following five P2/WMin elements is discussed:

- Fiscal Year (FY) Goals
- Budget and Staffing
- Waste Minimization (WMin) Assessments (WMAs)
- Pollution Prevention (P2) Reporting
- WMin Certification

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GLOSSARY

ABBREVIATIONS AND ACRONYMS

BHI	Bechtel Hanford, Inc.
CFR	Code of Federal Regulations
CHG	CH2M Hill Hanford Group, Inc.
DEAR	Department of Energy Acquisition Regulations
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy, Headquarters
DOE-RL	U.S. Department of Energy, Richland Operations Office
EPA	U.S. Environmental Protection Agency
EPCRA	<i>Emergency Planning and Community Right-To-Know Act of 1986</i>
FH	Fluor Hanford, Inc.
FR	Federal Register
FTE	Full Time Equivalent
FY	Fiscal Year
HLW	High-Level Waste
LEFF	Process Waste Water
LLW	Low-Level Waste
MLLW	Mixed Low-Level Waste
MTRU	Mixed Transuranic Waste
OHAZ	State Regulated Waste
ORP	U.S. Department of Energy, Office of River Protection
P2	Pollution Prevention
P2OA	Pollution Prevention Opportunity Assessment
P2/WMin	Pollution Prevention/Waste Minimization
P2/WMin Group	Fluor Hanford, Inc. Waste Management Project P2/WMin Group
PCB	Polychlorinated biphenyl
PNNL	Pacific Northwest National Laboratory
POC	Point of Contact
PPOA	Pollution Prevention Opportunity Assessment
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RHAZ	RCRA Hazardous Waste
RL	U.S. Department of Energy, Richland Operations Office
SAN	Solid Sanitary Waste
SpG	Specific Gravity
SWITS	Solid Waste Information Tracking System
TRU	Transuranic Waste
TSCA	<i>Toxic Substances Control Act of 1976</i> and TSCA-regulated waste (Polychlorinated Biphenyls (PCBs), etc.)
USC	United States Code

ABBREVIATIONS AND ACRONYMS (Continued)

WAC	Washington Administrative Code
WMin	Waste Minimization
WMA	Waste Minimization Assessment
WW-HAZ	RCRA- or State-Regulated Hazardous Waste, waste water
WW-HLW	High-Level Waste, waste water
WW-LLW	Low-Level Waste, waste water
WW-MLLW	Mixed Low-Level Waste, waste water
WW-MTSCA	TSCA Regulated Waste (PCB's, etc.), waste water
WW-SAN	Sanitary Waste, waste water
WW-TRU	Transuranic Waste, waste water

DEFINITIONS

Affirmative Procurement. A Program that ensures that items composed of recovered materials will be purchased to the maximum extent practicable, consistent with Federal law and procurement regulations (RCRA, Section 6002 and 40 CFR 247). Guidance on this program has been issued and is updated as the U. S. Environmental Protection Agency issues additional guidelines.

Cleanup/Stabilization Waste. Cleanup/stabilization includes environmental restoration of contaminated media (soil, groundwater, surface water, sediments, etc.), stabilization of nuclear and non-nuclear (chemical) materials, and deactivation and decommissioning (including decontamination) of facilities.

Cleanup/stabilization waste consists of one-time operations waste produced from environmental restoration activities, including primary and secondary wastes associated with retrieval and remediation operations, "legacy wastes," and wastes from decontamination and decommissioning/transition operations. It also includes all *Toxic Substances Control Act of 1976* regulated wastes, such as PCB-contaminated fluids or equipment.

Cleanup/stabilization activities that generate wastes do not necessarily occur at a single point in time, but may last for several years while producing wastes. By definition, these activities are not considered to be routine (periodic and/or on-going), because *the waste is a direct result of past operations and activities*, rather than a current process. Newly generated wastes that are produced during these "one-time operations" are considered a secondary waste stream, and are separately accounted for whenever possible. This secondary (newly generated) waste usually results from common activities such as handling, sampling, treatment, repackaging, shipping, etc.

Generator. Each contractor within the scope of the P2/WMin Program whose activities or processes produce waste.

Generator Group. As defined by the responsible contractor, any discrete activity, project,

or facility whose act or process produces waste.

Goal. A specific result toward which efforts are directed.

Hazardous Substance. Any hazardous substance listed as a hazardous substance in the *Emergency Planning and Community Right-to-Know Act of 1986* and any further updates, and all ozone depleting compounds as defined by the *Montreal Protocol of October 1987* and any further updates of the protocol.

Hazardous Waste. Those solid wastes that exhibit any of the characteristics of hazardous waste identified in 40 CFR 261, Subpart C (i.e., ignitable, corrosive, reactive, or toxic), or that are listed in 40 CFR 261, Subpart D, "List of Hazardous Wastes."

Low-Level Waste. Waste that contains radioactivity and is not classified as high-level waste, transuranic waste, or spent nuclear fuel, or by-product material as defined by DOE Order 5820.2A (DOE, 1988). Test specimens of fissionable material that are irradiated for research and development only, and not for the production of power or plutonium, may be classified as Low-Level Waste, provided the concentration of transuranic is less than 100 nanocuries per gram (nCi/g).

Mixed Low-Level Waste. Low-Level Waste containing hazardous components as defined by the RCRA (also low-level mixed waste).

Mixed Waste. Waste containing both radioactive and hazardous components as defined by the *Atomic Energy Act of 1954* and RCRA, respectively.

Non-Routine Waste. Identical to waste from cleanup/stabilization activities.

Pollutant. A substance whose dispersion into the environment has a deleterious effect on the ecosystem.

Pollution Prevention. The use of materials, processes, and practices that reduce or eliminate the generation and release of pollutants, contaminants, hazardous substances, and waste into land, water, and air. For the U. S. Department of Energy, this includes recycling activities.

Pollution Prevention Opportunity Assessment. Evaluation and appraisal of a process, activity, or operation as a way to identify potential WMin opportunities.

Process Waste Water. Any water produced during manufacturing or processing operations that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. This determination is independent of the level and/or nature of the contaminants. Additionally, process waste waters are liquid wastes, which are directly piped to a permitted (on-site) waste treatment facility where treatment may consist of neutralization, evaporation, or placement in a settling or percolation pond, etc. This term does not include the liquid discharges to publicly owned treatment works, which are governed by U.S. Environmental Protection Agency- or state-issued national pollutant

discharge elimination system permits, or local pretreatment standards.

RCRA-Regulated Waste. Solid waste, not specifically excluded from regulations under 40 CFR 261.4, "Identification and Listing of Hazardous Waste," or delisted by petition, that is either a listed hazardous waste (40 CFR 261.30 to 261.33) or exhibits the characteristics of a hazardous waste (40 CFR 261.20 to 261.24).

Recycling. Recycling techniques are characterized as use, reuse, and reclamation techniques (resource recovery). **Use** or **reuse** involves the return of a potential waste material either to the originating process as a substitute for an input material or to another process as an input material. **Reclamation** is the processing or regeneration of a material to recover a useable product.

Routine Operations Waste. Normal operations waste produced from any type of production, analytical, and/or research and development laboratory operations; treatment, storage, or disposal operations; "work-for-others;" or any periodic and recurring work that is considered ongoing. The term "normal operations" refers to the type of ongoing process (e.g., production) not the specific activity that produced the waste. Periodic laboratory or facility clean-outs and spill cleanups that occur as a result of these processes are also considered normal operations.

Sanitary Waste. All non-hazardous and non-radioactive waste disposed in a sanitary landfill including demolition waste, industrial wastes, and wastes such as garbage generated by normal housekeeping activities.

Segregation. The practice of separating or isolating contaminated materials from non-contaminated materials, or the separation/isolation of one waste type from another in an attempt to minimize the amount of the more noxious (and costly) material for disposal.

Source Reduction. The elimination or reduction of waste generation at the source. Source reduction activities and techniques include substitution of less hazardous materials, process optimization or modification, technology changes and administrative changes (inventory control), and housekeeping practices. Source reduction results in reducing or eliminating potential waste material exiting from a process.

State-Only Dangerous Waste. Any other hazardous waste not specifically regulated under TSCA or RCRA, such as used oil, that may be regulated by Washington State Department of Ecology under WAC 173-303.

Transuranic Waste. Without regard to source or form, waste that is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay. Heads of Field Elements can determine that other alpha contaminated wastes, peculiar to a specific site, must be managed as transuranic waste (DOE, 1988).

Treatment. Any method, technique, or process (including neutralization) designed to

change the physical, chemical, or biological character or composition of any hazardous, radioactive, or sanitary waste so as to neutralize such waste, to recover energy or material resources from the waste, or to render such waste non-hazardous; safer to transport, store, or dispose; or amenable for recovery or storage; or reduced in volume.

TSCA-Regulated Waste. Wastes, both liquid and solid, containing more than 50 parts per million (ppm) of PCBs or PCBs regulated for disposal (DOE, 1996).

Waste Minimization. Elimination or minimization of the generation of waste before treatment, storage, or disposal. Waste minimization is any source reduction or recycling activity that results in (1) reduction of total volume of waste, (2) reduction of toxicity of waste, or (3) both, as long as that reduction is consistent with the general goal of minimizing present and future threats to human health and the environment.

Waste Minimization Assessment. An evaluation and appraisal of a process, activity, or operation to identify potential waste minimization opportunities. Waste minimization assessments include pollution prevention opportunity assessments, value engineering studies, and engineering studies.

Waste Reduction. Reduction of the total amount of waste that is generated and disposed of by DOE operations through WMin and treatment activities.

1.0 INTRODUCTION

1.1 PURPOSE OF GUIDE

This document provides guidance to contractor generator groups for developing and maintaining documentation of P2/WMin Program activities. The program documentation is intended to demonstrate generator compliance with U. S. Department of Energy (DOE) requirements as well as state and Federal regulations. The guidance is one of a hierarchical series that includes the *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan* (DOE-RL, 2000) and Prime Contractor implementation plans describing programs required by RCRA 3002(b) and 3005(h) (RCRA and EPA, 1994) and DEAR (48 CFR 970.5204-2 and 48 CFR 970.5204-78).

1.2 BACKGROUND

The purpose of the Hanford Site P2/WMin Program is to eliminate or reduce waste generation and pollutant releases to the environment, use of toxic substances, and to conserve resources. The P2/WMin Program has been developed to meet P2/WMin public law requirements, Federal and state regulations, and DOE requirements (DOE-RL, 2000). The Hanford Site P2/WMin Program is implemented through sitewide and contractor programs. The *Hanford Site Waste Minimization and Pollution Prevention Awareness Plan* (DOE-RL, 2000) provides overall requirements. Each Prime Contractor [Fluor Hanford, Inc. (FH), Bechtel Hanford, Inc. (BHI), CH2M Hill Hanford Group, Inc. (CHG), and Pacific Northwest National Laboratory (PNNL)] is required to have an implementation plan describing how the requirements will be met (DOE-RL, 2000). The documentation guide identifies the documentation required to be maintained on file that demonstrates compliance with the requirements.

The U.S. Environmental Protection Agency (EPA) provides guidance for a RCRA-compliant WMin program (58 FR 31114, 1993). The DOE also outlines the elements of a generator-specific P2 program (DOE, 1996). The EPA and DOE program elements are presented in Appendix A and are applicable at the Hanford Site, Prime Contractor, and generator group level.

Generator groups are required to maintain documentation on file only for the key P2 elements listed in Table 1-1. Documentation of these key elements will demonstrate compliance with regulatory, Federal, and Hanford Site requirements.

Table 1-1 Key Program Elements for Generator Group Pollution Prevention Program Documentation.
FY Goals
Budget and Staffing -- Budget and Full Time Equivalent (FTE) staff supporting P2/WMin activities.
WMAs
P2 Reporting -- Quarterly reports
WMin Certification

2.0 POLLUTION PREVENTION/WASTE MINIMIZATION PROGRAM DOCUMENTATION

This section discusses documentation for the P2/WMin elements that is to be kept on file.

2.1 FISCAL YEAR GOALS

Establishing goals is essential to a successful P2/WMin Program and is an important and required element of the Hanford Site P2/WMin Program. P2 goals are necessary to (1) meet Federal, state, and DOE regulations and reporting requirements; (2) provide a system for tracking progress and measuring success of P2/WMin activities; and (3) focus efforts on results-oriented, achievable activities that reduce the generation of waste and pollutants to all media, reduce the use of hazardous substances, and increase the conservation of energy and natural resources.

In establishing waste reduction goals for wastes generated from routine operations, generators or generator groups should consider waste generation goals assigned to their company to support meeting the Secretary of Energy's Pollution Prevention and Energy goals. Qualitative goals may be established. Generators and generator groups shall report progress toward attaining goals in their quarterly status reports.

2.1.1 Secretary of Energy Pollution Prevention and Energy Goals

The DOE has established waste reduction goals for waste generated from routine operations for the DOE complex to be achieved by 2005 and 2010 and has also established waste reduction goals for waste generated from cleanup/stabilization operations to be achieved on an annual basis (DOE, 2000). The November 1999 memorandum from The Secretary of Energy announcing the goals is presented in Appendix B. Calendar Year 1993 waste generation data is the baseline year for many of the routine waste reduction goals. U.S. Department of Energy-Richland Operations Office (RL) and U.S. Department of Energy-Office of River Protection (ORP) have accepted these goals for the Hanford Site. These goals are applicable to the routine and cleanup/stabilization waste generators as noted. The goals are itemized below.

1. Reduce waste from routine operations by 80% by 2005, using a 1993 baseline, for the following waste types:
 - LLW
 - MLLW
 - TRU and MTRU
2. Reduce Hazardous Waste from routine operations by 90% by 2005, using a 1993 baseline.
3. Reduce the releases of toxic chemicals subject to Toxic Release Inventory (TRI) reporting by 90% by 2005 using a 1993 baseline.

4. Reduce sanitary waste from routine operations by 75% by 2005 and 80% by 2010, using a 1993 baseline.
5. Recycle 45% of sanitary wastes from all operations by 2005 and 50% by 2010.
6. Reduce waste resulting from cleanup, stabilization, and decommissioning activities by 10% on an annual basis.
7. Increase purchases of EPA-designated items with recycled content to 100%, except when (1) the price is not competitive, (2) the item is not available in a timely manner or not available at all, or (3) the item does not meet performance standards.
8. Reduce energy consumption through life-cycle cost effective measures by:
 - 40% by 2005 and 45% by 2010 per gross square foot for buildings, using a 1985 baseline
 - 20% by 2005 and 30% by 2010 per gross square foot, or per other unit as applicable, for laboratory and industrial facilities, using a 1990 baseline.
9. Increase the purchase of electricity from clean energy sources:
 - (a) Increase the purchase of electricity from renewable energy sources by including provisions for such purchase as a component of DOE's request for bids in 100% of all future DOE competitive solicitations for electricity.
 - (b) Increase the purchase of electricity from less greenhouse gas-intensive sources, including but not limited to new advanced technology fossil energy systems and other highly efficient generating technologies.
10. Retrofit or replace 100% of chillers greater than 150 tons of cooling capacity and manufactured before 1984 that use class I refrigerants by 2005.
11. Eliminate the use of class I ozone depleting substances by 2010, to the extent economically practicable, and to the extent that safe alternative chemicals are available for DOE class I applications.
12. Reduce greenhouse gas emissions attributed to facility energy use through life-cycle cost-effective measures by 25% by 2005 and 30% by 2010, using 1990 as a baseline.
13. Reduce DOE's entire fleet's annual petroleum consumption by at least 20% by 2005 in comparison to 1999, including improving the fuel economy of new light duty vehicle acquisitions, and by other means.
14. Acquire each year at least 75% of light duty vehicles as alternative fuel vehicles, in accordance with the requirements of the Energy Policy Act of 1992.

15. Increase the usage of alternative fuel in Departmental alternative fuel vehicles to 75% by 2005 and 90% by 2010 in area where alternative fuel infrastructure is available.

Specific FY 2001 goals for Hanford Site prime contractors are presented in the *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan* (DOE-RL, 2000). Also, additional discussion on goals can be found in the *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan* (DOE-RL, 2000) and Prime Contractor implementation plans.

Generators or generator groups will establish fiscal year waste reduction goals to meet the Secretary of Energy's specific P2/WMin goals. Fiscal year waste reduction goals are to be submitted by October 15th to the FH Waste Management Project P2/WMin Group (P2/WMin Group). FY 2001 goals are to be approved and signed by generator or generator group management, submitted, and filed with the generator's or generator group's program documentation. A suggested format for the documentation of established goals is provided in Appendix C

2.2 POLLUTION PREVENTION BUDGET DOCUMENTATION REQUIREMENTS

Hanford Site contractors are required to develop budgets for activities that will help contractor generator groups achieve their goals and maintain the DOE and EPA P2 program elements presented in Appendix A. The DOE P2 program elements listed in Appendix A are to be considered in a P2 program for an individual facility. Separate, identifiable funding shall be established within individual cost account plans depending on contractor funding needs.

Copies of the appropriate budget documentation will be maintained as program documentation. In cases where funding is not established in separate budget documents, estimated budget information should be maintained as documentation. The quarterly status report, discussed in Section 2.4, also provides documentation of planned and actual budget as well as the P2 staffing level in FTEs.

2.3 WASTE MINIMIZATION ASSESSMENTS

An important part of an effective P2/WMin Program is the identification of waste streams as well as the activities that produce those wastes. Once those waste streams have been characterized (constituents, concentrations, quantities), they can be prioritized and evaluated for reduction. In evaluating a given waste stream for reduction it is desirable that alternative reduction methods be considered and economically evaluated. Evaluating alternative waste reduction methods in order to identify waste reduction opportunities should be the primary purpose of a WMA. The preferred assessment method at the Hanford Site is conducting a Pollution Prevention Opportunity Assessment (P2OA). Other evaluation methods, such as value engineering studies, engineering evaluations, and P2/WMin in design assessments, are also acceptable.

The P2OA is a structured assessment process that utilizes a systematic approach to identify and document WMin opportunities. Training on conducting P2OAs is available from the P2/WMin Group. The *Pollution Prevention Opportunity Assessments -- A Training and Resource Guide*, (DOE-RL, 1998) is also available to help waste generator groups complete these activities.

WMAs must also be documented. Documentation should be maintained in the program documentation file. The results of WMAs should be placed on the Hanford P2 Home Page at <http://apsql05.rl.gov/polprev/default.asp>. To place a WMA on the Hanford P2 Home Page, waste generator groups should submit the completed WMA along with an assessment summary in electronic format to their P2/WMin Group point of contact (POC).

2.4 POLLUTION PREVENTION/WASTE MINIMIZATION REPORTING

This section discusses the P2/WMin reporting requirements. Reports should be submitted electronically using formats available at <http://apsql05.rl.gov/polprev/areport/report.htm>. Alternatively, if access to the Hanford intranet is unavailable, data may be submitted on hard copy to the P2/WMin Group POC using the forms provided in Appendix E.

All Hanford Site waste generator groups shall submit a Quarterly Report by January 15th, April 15th, July 15th, and October 15th. The Quarterly Report is divided into two electronic forms: 1) Waste Reduction Accomplishments and 2) Status. Both forms are accessible via the Hanford P2 Home Page at <http://apsql05.rl.gov/polprev/areport/report.htm>. The P2/WMin Group is available to answer questions or provide further clarification on completing the Quarterly Reports.

2.5 WASTE MINIMIZATION CERTIFICATION

All generator groups shall certify annually that a WMin program is in place as required by RCRA 3002(b) and 3005(h) (RCRA), the Hanford Site Dangerous Waste Permit (EPA, 1994) and 40 Code of Federal Regulations (CFR) 264.73. A WMin certification form is shown in Appendix F and is also available on the Hanford P2 Home Page at <http://apsql05.rl.gov/polprev/areport/cert.htm>. The form should be completed and signed by facility management and maintained on file in the facility's operating record.

3.0 REFERENCES

40 CFR 247, "Comprehensive Procurement Guideline for Products Containing Recovered Materials," *Code of Federal Regulations*, as amended.

40 CFR 261, "Identification and Listing of Hazardous Waste," *Code of Federal Regulations*, as amended.

40 CFR 264.73, "Operating Record," *Code of Federal Regulations*, as amended.

58 FR 31114, 1993, "Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program," *Federal Register*, Vol. 58, No. 102, pages 31114-31120, 1993, Washington, D.C.

Atomic Energy Act of 1954, 42 USC 2011, et seq.

DOE, 1988, *Radioactive Waste Management*, DOE Order 5820.2A, U.S. Department of Energy, Washington, D.C.

DOE, 1996, *Pollution Prevention Program Plan*, U.S. Department of Energy, DOE/S-0118, Washington, D.C.

DOE-RL, 1998, *Pollution Prevention Opportunity Assessments--A Training and Resource Guide*, DOE/RL-96-80, Revision 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington, October 1998.

DOE-RL, 2000, *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan*, DOE/RL-91-31, Revision 5, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

EPA, 1994, *Hanford Facility Dangerous Waste Permit*, Permit Number WA7890008967, Hazardous and Solid Waste Amendments Portion, U.S. Environmental Protection Agency, Seattle, Washington.

EPCRA, *Emergency Planning and Community Right-to-Know Act*, as amended, 42 USC 11013, 11028, et seq.

RCRA, *Resource Conservation and Recovery Act of 1976*, 42 USC 6901, et seq.

TSCA, *Toxic Substances Control Act of 1976*, 15 USC 2601, et seq.

WAC 173-303, *Dangerous Waste Regulations*, Publication No. 92-91, Amended November 1995, Washington State Department of Ecology, Olympia, Washington.

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APPENDIX A

POLLUTION PREVENTION PROGRAM ELEMENTS

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POLLUTION PREVENTION PROGRAM ELEMENTS

A1.1 Generator Group Program Implementation Elements

P2 program implementation elements recommended by the DOE are given below (DOE, 1996). Table A1-1 lists P2 program elements recommended by EPA (EPA, 1993). A descriptive reference that discusses each element is also indicated in Table A1-1.

1. Organization and Infrastructure

- Designate a generator group P2 coordinator,
- Interface with the sitewide P2 coordinator(s),
- Participate in the sitewide P2 Network,
- Institute corrective actions resulting from program evaluation.

2. Program Development

- Develop and maintain generator group P2 program documentation,
- Establish goals,
- Develop activity schedules for specific tasks and projects,
- Obtain budgets for generator group programmatic activities,
- Assign personnel to develop and implement the generator group P2 program,
- Integrate P2 practices into operating procedures.

3. Sitewide Program Participation

- Involve employees in job-specific P2 practices,
- Exchange information and technologies with other waste generator groups,
- Seek technical assistance,
- Track material use,
- Report on material usage, recycling, and progress made in implementing P2 practices,

- Participate in sitewide waste reduction and recycling programs.
4. Training
- Identify job-specific P2 training needs,
 - Participate in P2OA and high Return on Investment training.
5. P2 Opportunity Assessments/Implementation
- Identify and evaluate current and potential waste-generating activities,
 - Identify and prioritize P2 opportunities,
 - Conduct P2OAs on waste streams,
 - Implement process modifications and material substitutions,
 - Evaluate the potential of new technologies on waste-generating activities.
6. Use affirmative procurement practices
- Encourage affirmative procurement in the purchase of EPA-designated recycled content products.
7. Design Considerations
- Design P2 principles and practices into new and modified facilities,
 - Incorporate P2 into facility upgrades and process modifications and document these upgrades for projects in the conceptual design review/report phase of a project valued at a general plant project or higher,
 - Incorporate Sustainable Design into the design and siting of new facilities.
8. Program Evaluation
- Evaluate generator group program implementation status,
 - Evaluate waste reduction/performance.

**Table A1-1. U.S. ENVIRONMENTAL PROTECTION AGENCY
WASTE MINIMIZATION PROGRAM ELEMENTS
GUIDANCE COMPLIANCE MATRIX**

EPA guidance ¹ WMin Program elements (per RCRA) ²	Program Element Descriptive Reference
A. Top management support Hanford Site policy Company policy Set goals Commitment opportunity implementation Facility coordinator Publicize successes Incentives Training	Hanford Site plan Contractor plan Hanford Site plan and contractor plan Hanford Site plan and contractor plan Contractor plan Hanford Site plan and contractor plan Hanford Site plan and contractor plan Hanford Site plan and contractor plan
B. Characterization of waste generation and waste management costs	Hanford Site plan and contractor plan
C. WMAs Identification of opportunities Determine true costs of the waste	Hanford Site plan and contractor plan Contractor plan
D. Cost allocation system	Hanford Site plan and contractor plan
E. Technology transfer	Hanford Site plan and contractor plan
F. Program implementation and evaluation	Hanford Site plan and contractor plan

1 (EPA, 1993)

2 (RCRA, 1976)

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APPENDIX B

SECRETARIAL MEMORANDUM:

POLLUTION PREVENTION AND ENERGY EFFICIENCY LEADERSHIP

GOALS FOR FISCAL YEAR 2000 AND BEYOND

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The Secretary of Energy

Washington, DC 20585
November 12, 1999

MEMORANDUM FOR HEADS OF DEPARTMENTAL ELEMENTS

FROM: BILL RICHARDSON *Bill Richardson*
SUBJECT: Pollution Prevention and Energy Efficiency Leadership
Goals for Fiscal Year 2000 and Beyond

The President has unfurled a major, new initiative to build environmental accountability into the daily decision-making process of all Federal activities. By "Greening the Government," Federal agencies can contribute to building a sustainable, environmentally-healthy economy for the next century. Federal facilities that employ pollution prevention and energy efficiency practices will save money by enhancing productivity while reducing their cumulative impact on the environment.

The Department's pollution prevention and energy efficiency leadership program will go beyond compliance requirements and be based on continuous and cost-effective improvements for the following key environmental objectives:

- We will design and operate our facilities using pollution prevention processes that lead to minimal waste generation and lowest life-cycle costs;
- We will diminish our use of environmentally harmful materials, equipment, and processes to minimize releases of toxic chemicals, ozone-depleting substances, and greenhouse gases;
- We will increase the energy efficiency of our buildings, laboratories and production facilities while increasing our use of clean energy sources;
- We will increase our fleet vehicle efficiency and the use of low-polluting alternative fuels, including bio-based fuels and products; and
- We will purchase environmentally preferable products and services that meet our mission needs.

To put us on the path toward environmental leadership, I am laying down a foundation of Pollution Prevention and Energy Efficiency Leadership Goals for 2005 and 2010 (attached). I am directing each Lead Program Secretarial Officer to implement programs that will achieve these objectives at their sites through pollution prevention and resource conservation. These goals will also be incorporated into the Department's Strategic and Annual Performance Plans, starting with performance plans accompanying the FY 2001 budget.

The Department of Energy Environmental Executive will oversee progress toward meeting our environmental and energy efficiency leadership goals and will report to me annually.

Attachment

POLLUTION PREVENTION AND ENERGY EFFICIENCY LEADERSHIP GOALS AT DEPARTMENT OF ENERGY FACILITIES

DOE will strive to minimize waste and maximize energy efficiency as measured by continuous, cost-effective improvements in the use of materials and energy, with the years 2005 and 2010 as interim measurement points.

Reducing Waste and Recycling

1. Reduce waste from routine operations by 2005, using a 1993 baseline, for these waste types:

Hazardous	90 percent
Low Level Radioactive	80 percent
Low Level-Mixed Radioactive	80 percent
Transuranic (TRU)	80 percent
2. Reduce releases of toxic chemicals subject to Toxic Chemical Release Inventory reporting by 90 percent by 2005, using a 1993 baseline.
3. Reduce sanitary waste from routine operations by 75 percent by 2005 and 80 percent by 2010, using a 1993 baseline.
4. Recycle 45 percent of sanitary wastes from all operations by 2005 and 50 percent by 2010.
5. Reduce waste resulting from cleanup, stabilization, and decommissioning activities by 10 percent on an annual basis.

Buying Items with Recycled Content

6. Increase purchases of EPA-designated items with recycled content to 100 percent, except when not available competitively at reasonable price or that do not meet performance standards.

Improving Energy Usage

7. Reduce energy consumption through life-cycle cost effective measures by:
 - 40 percent by 2005 and 45 percent by 2010 per gross square foot for buildings, using a 1985 baseline
 - 20 percent by 2005 and 30 percent by 2010 per gross square foot, or per other unit as applicable, for laboratory and industrial facilities, using a 1990 baseline.

8. Increase the purchase of electricity from clean energy sources:
 - (a) Increase purchase of electricity from renewable energy sources by including provisions for such purchase as a component of our request for bids in 100 percent of all future DOE competitive solicitations for electricity.
 - (b) Increase the purchase of electricity from less greenhouse gas-intensive sources, including, but not limited to, new advanced technology fossil energy systems, hydroelectric, and other highly efficient generating technologies.

Reducing Ozone Depleting Substances and Greenhouse Gases

9. Retrofit or replace 100 percent of chillers greater than 150 tons of cooling capacity and manufactured before 1984 that use class I refrigerants by 2005.
10. Eliminate use of class I ozone depleting substances by 2010, to the extent economically practicable, and to the extent that safe alternative chemicals are available for DOE class I applications.
11. Reduce greenhouse gas emissions attributed to facility energy use through life-cycle cost-effective measures by 25 percent by 2005 and 30 percent by 2010, using 1990 as a baseline.

Increasing Vehicle Fleet Efficiency and Use of Alternative Fuels

12. Reduce our entire fleet's annual petroleum consumption by at least 20 percent by 2005 in comparison to 1999, including improving the fuel economy of new light duty vehicle acquisitions and by other means.
13. Acquire each year at least 75 percent of light duty vehicles as alternative fuel vehicles, in accordance with the requirements of the Energy Policy Act of 1992.
14. Increase usage rate of alternative fuel in departmental alternative fuel vehicles to 75 percent by 2005 and 90 percent by 2010 in areas where alternative fuel infrastructure is available.

Goals Implementation

The Secretary's Pollution Prevention and Energy Efficiency Leadership Goals are to be achieved on a Department-wide basis. DOE field offices will be responsible for developing appropriate goals for each of their cognizant sites and implementing pollution prevention and energy management site activities that are cost effective to the Department on a life-cycle basis. Field offices will assure goals are achieved by including goal requirements in annual performance plans or established performance agreements with each of their cognizant sites. Appropriate baselines for new sites will be established in performance agreements in cases where proposed baseline years do not apply.

Goals Under Development

The Department will revise or issue additional goals as new pollution prevention and energy efficiency Executive Orders are released. Additional goals to be developed in Fiscal Year 2000 include: (1) the amount of energy generated at Federal facilities from renewable energy technologies; and, (2) water conservation and the methodology for determining the baseline for water consumption.

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APPENDIX C

INSTRUCTIONS FOR PREPARING FISCAL YEAR

POLLUTION PREVENTION/WASTE MINIMIZATION AND

ENERGY EFFICIENCY GOALS

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**Table C-1. Instructions for Preparing Fiscal Year
Pollution Prevention/Waste Minimization Goals**

1. List on the table below the waste generation forecast or other basis for the waste type listed.
2. Enter the estimated quantity resulting from source reduction and recycling as a percentage of the forecasted quantity.

Fiscal Year Goals For FY ____.

____ Routine Waste ____ Cleanup/Stabilization or Non-Routine Waste

Waste classification	Waste forecast or Other Basis of Estimate	Source reduction (Percent)	Recycling (Percent)	Treatment (Percent)
Low-level Waste (LLW)	(m ³)			
Transuranic Waste (TRU)	(m ³)			
Mixed Low-level Waste (MLLW)	(m ³)			
Mixed Transuranic Waste (MTRU)	(m ³)			
RCRA Hazardous Waste	(mt)			
State-only Dangerous Waste	(mt)			
<i>Toxic Substances Control Act of 1976 (TSCA)-regulated waste</i>	(mt)			
Sanitary Waste	(mt)			
Reduction of the use of class I ozone depleting substances	(mt)			

Approved: _____
Generator or Generator Group Management

**Table C-2. Instructions for Preparing Fiscal Year
Energy Efficiency Goals**

1. List on the table below the energy consumption forecast or other basis for the activity listed.
2. Enter the estimated energy consumption resulting from more efficient energy consumption practices as a percentage of the forecasted energy consumption.

Fiscal Year Goals For FY ____.

Activity	Energy Consumption Forecast of Other Basis of Estimate	Energy Efficiency Goal (as described)
Reduction of energy consumption for buildings through life cycle cost effective measures	(kwh)	
Reduction of energy consumption for non-building units through life cycle cost effective measures	(kwh)	
Increase the purchase of electricity from renewable energy sources	(kwh)	
Increase the purchase of electricity from less greenhouse gas-intensive sources	(kwh)	
Replacement of > 150 ton chillers	(number operating)	
Reduction of greenhouse gas emissions attributed to facility energy use	(mt)	
Reduction of fleet annual petroleum consumption	(gal)	
Acquisition of light duty alternative fuel vehicles	(number purchased in FY 2000)	
Increase in usage of alternative fuels in alternative fuel vehicles	(gal)	

Approved: _____
Generator or Generator Group Management

APPENDIX D

EPA-DESIGNATED AFFIRMATIVE PROCUREMENT PRODUCTS LIST

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APPENDIX D**EPA-DESIGNATED AFFIRMATIVE PROCUREMENT PRODUCTS LIST**

Table D1-1 is a list of EPA-designated products considered for affirmative procurement. The list of EPA-designated products may also be found on the Affirmative Procurement page at <http://apsql05.rl.gov/polprev/ap/ap.htm>.

Table D1-1. EPA-DESIGNATED AFFIRMATIVE PROCUREMENT PRODUCTS LIST

Category	Designated Items
Construction Products	<ul style="list-style-type: none"> • Building insulation • Carpet • Carpet Cushion* • Cement and concrete containing fly ash • Cement and concrete containing blast furnace slag • Consolidated and reprocessed latex paint • Floor tiles • Flowable fill* • Laminated paperboard • Patio blocks • Railroad grade crossing surfaces* • Shower and restroom dividers and partitions • Structural fiberboard
Landscaping Products	<ul style="list-style-type: none"> • Garden and soaker hoses • Hydraulic mulch • Landscaping timbers and posts (plastic lumber)* • Lawn and garden edging • Compost made from yard waste and food waste* • Yard trimmings compost
Non-Paper Office Products	<ul style="list-style-type: none"> • Binders (paper, plastic covered) • Office recycling containers • Office waste receptacles • Plastic desktop accessories • Plastic envelopes • Plastic trash bags • Printer ribbons • Toner cartridges • Plastic binders (solid)* • Plastic clipboards* • Plastic clip portfolios* • Plastic file folders* • Plastic presentation folders*

**Table D1-1 (Continued). EPA-Designated
Affirmative Procurement Products List**

Category	Designated Items
Paper and Paper Products	<ul style="list-style-type: none"> • Tissue products • Newsprint • Paperboard and packaging products • Un-coated printing and writing papers • Coated printing and writing papers • Bristols • Tray liners
Park and Recreation Products	<ul style="list-style-type: none"> • Park and recreational furniture* • Plastic fencing • Playground equipment* • Playground surfaces • Running tracks
Transportation Products	<ul style="list-style-type: none"> • Channelizers • Delineators • Flexible Delineators • Parking stops • Traffic barriers • Traffic cones
Vehicular Products	<ul style="list-style-type: none"> • Reclaimed engine coolants • Re-refined lubricating oils • Retread tires
Miscellaneous Products	<ul style="list-style-type: none"> • Awards and plaques* • Industrial drums* • Mats* • Pallets • Signage* • Sorbents* • Manual-grade strapping*

* - New product identification

References: *Comprehensive Guideline for Procurement of Products Containing Recovered Materials* (60 FR 21370, May 1, 1995), *Recovered Materials Advisory Notice* (60 FR 21386, May 1, 1995), *Paper Products Recovered Materials Advisory Notice* (60 FR 26986, May 29, 1996), and *Comprehensive Guideline for Procurement of Products Containing Recovered Materials: Proposed Rule* (63 FR 45557, August 26, 1998)

APPENDIX E
QUARTERLY REPORT FORMS AND GUIDANCE

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E1.1 QUARTERLY REPORT FORMS AND GUIDANCE

P2 quarterly report forms are included in this appendix. Guidance on report input is included in Sections E1.1.1 and E1.1.2 below. Forms are available for completion and submittal on the Hanford P2 Home Page at <http://apsql05.rl.gov/polprev/default.asp>.

Copies of these reports should be maintained on file in the generator group program documentation.

Add an Entry to the Database

Facility: WMH P2

Click on the  icon for help.

Fiscal Year:


Quarter: ☒ 1st ☐ 2nd ☐ 3rd ☐ 4th

 Facility Name: WMH P2

 Technical Contact: Phone:

 Waste Stream Name:

 Waste Type: (LLW) Low-Level Waste 

 Waste Form: ☐ Liquid ☐ Gas ☒ Solid ☐ Sludge

 Waste Source: ☒ Routine ☐ Non-Routine

 Describe the Waste Reduction Activity:

 Was this activity the result of P2 in Design Opportunities? ☐ Yes ☒ No

 Waste Min Approach: ☒ Source Reduction ☐ Recycling ☐ Treatment ☐ Segregation

 Implementation Date:

 Amount Reduced:

? Amount Recycled: on-site off-site

? Units:

? Density: Density Units:

? Estimated Cost of Implementation:

? Estimated Dollar Savings for Quarter:

? Programmatic Entry? ☐ Yes ☒ No

DOE-HQ has determined the following to be Essential Data:

? Estimated Dollar Savings for Next 10 Years:

Submit this Entry

Return to: [Hanford Home Page](#) or [Polkville Promotion Home Page](#)
For specific questions or comments see our [Contact Us](#) list or send feedback to David Nichols
URL: <http://epa.gov/OS-R/growtop/previreport/question/Addform.asp>

E1.1.1 Guidance for Quarterly Waste Reduction Accomplishments Report

Help items for the Quarterly Report on Waste Reduction Accomplishments are provided below.

Fiscal Year:

Enter applicable FY.

Quarter:

Select applicable reporting quarter.

Facility Name:

Select the name of the Facility where the reduction/recycling/treatment occurred. If the facility does not appear in the list then leave blank. The facility name can be added by including it in the "Activity Description" field below.

Technical Contact: Phone:

Provide the name and phone number of someone familiar enough with the details of this activity to answer questions on the technical content.

Waste Stream Name:

Please provide the Solid Waste Information Tracking System (SWITS) stream code, such as B003 or H016, if applicable. Otherwise, enter the descriptive stream name used at the facility to track cumulative quantities generated by this waste stream. If in doubt, check with the group responsible for tracking/reporting quantities generated. The combination of Contractor, Facility Name, and Waste Stream Name must be unique in order to properly track waste reductions and report a rollup at the end of the year.

If you are editing the entry then this data has been locked and cannot be changed.

Waste Type:

Click on the down arrow at the end of the entry box and highlight the appropriate waste type. If the waste type you are reporting is not in the list then please contact your facility representative in the P2/WMin Group.

The choices are:

- (LLW) Low-Level Waste
- (MLLW) Mixed Low-Level Waste
- (TRU) Transuranic Waste
- (MTRU) Mixed Transuranic Waste
- (HLW) High-Level Waste
- (HAZ) RCRA Hazardous Waste
- (OHAZ) State Regulated Waste
- (SAN) Solid Sanitary Waste
- (LEFF) Process Waste Water*
- (TSCA) Toxic Substance (PCB's, etc.)
- (WW-LLW) Low-Level Waste, waste water
- (WW-MLLW) Mixed Low-Level Waste, waste water
- (WW-TRU) Transuranic Waste, waste water
- (WW-HLW) High-Level Waste, waste water
- (WW-HAZ) RCRA- or State-Regulated Hazardous Waste, waste water
- (WW-SAN) Sanitary Waste, waste water
- (WW-MTSCA) TSCA Regulated Waste (PCB's, etc.), waste water

* This is a discontinued category. Please use the "WW-" categories for waste water streams.

Waste Form:

Select one of the 4 waste forms by clicking the radio button preceding the form type you wish to select. The 4 choices are:

- Liquid- mostly or all liquid. May contain some solids.
- Gas- containerized
- Solid- contains no free liquid
- Sludge- mostly solids but contains some free liquid

Waste Source:

Selecting the correct waste source is essential since waste minimization goals and reports are different for non-routine waste sources. Click on the radio button that precedes the selection you wish to make. Only one can be selected. The definitions of routine and non-routine wastes seem to change from time to time. Consult the *Hanford Guide for Preparing and Maintaining Generator Group Pollution Prevention Program Documentation* (DOE/RL-95-103) for the current definition.

Describe the Waste Reduction Activity:

Include the reason for initiating the activity, what was reduced and the actions that enabled the reduction of waste. This description is all the information that is available to those outside the Hanford area, so please be as descriptive as possible.

This description needs to be entered only once into the database. If you have already reported this activity and provided a description then this field may be left blank.

Was this activity the result of P2 in Design Opportunities?:

If you have identified opportunities through P2 in design, provide a description and a projected implementation date.

Update this item in future quarterly reports only if the status changes.

Waste Min Approach:

Select one of the four options provided by clicking on the radio button immediately preceding the correct approach.

- Source Reduction
- Recycling
- Treatment
- Segregation

DOE-HQ doesn't have an official definition for "segregation," but considers the following activities as segregation:

- - waste stream segregation/sorting
- - survey for release/green-is-clean
- - decontamination for salvage/reuse/recycle
- - contamination control/containment
- - loss prevention/spill control
- - co-mingling prevention

Source reduction is any activity which prevents the generation of the waste and includes such activities as procedure modification and product substitution.

Treatment is any activity that changes the physical nature of the waste.

Reuse/Recycling includes the use or reuse of a material.

If the waste was minimized using more than one approach then you must submit a form

for each approach. Do not double report waste reduction quantities. Allocate the appropriate percentage to each approach. This may be 0-100%.

If you have questions please call your P2/WMin Group POC.

Implementation Date:

Enter the date this activity was first implemented. Use the format mm/yy for input. For example July 4, 2001 would be 07/01.

This field is only for new activities implemented during the current reporting period. If the activity was implemented prior to this reporting period then leave blank or enter N/A.

Amount Reduced:

If you are reporting recycling information then leave this field blank.

Otherwise-

Enter the numeric value for the total Source Reduction (including hazardous constituent reduction) achieved during this reporting period. The units (kilogram, cubic meters, etc.) for this reduction activity will be identified in box immediately following the Recycling data area.

Amount Recycled:

If you are not reporting a recycling activity then no action is required for these fields.

For a recycling activity enter the numeric value(s) for the quantity recycled on-site, off-site, or both. Do not double report values. Then click on the down arrow of the units box to select the correct units for the quantity reported.

Report only the quantity(s) recycled during this reporting period.

Units:

Use the down arrow in the units box to bring up a list of units to select from. Highlight the correct units for the value(s) entered in the Source reduction, On-Site, and/or Off-site field(s). Federal and State requirements are that sanitary and solid waste quantities be reported in kilograms; all other waste types are reported by volume.

Conversions will be made to the required units for you.

Density:

If you reported Sanitary or Solid wastes by volume or reported one of the other waste types by weight (mass), then you must provide a density factor for conversion. Otherwise you can omit these two fields.

Enter a numeric value for the density. This may be a specific gravity (SpG) which is unitless or mass per unit volume such as pounds per cubic foot.

Next--Click on the down arrow in the units box and select the appropriate units.

Estimated Cost of Implementation:

This field applies only to new activities that were implemented during the current reporting period.

Provide a dollar estimate of the total dollar cost to implement this waste reduction activity. Include equipment costs, charges for procedure modification and any expenses incurred during design, installation, and testing.

Estimated Dollar Savings for Quarter:

Note- This field is for all activities regardless of the implementation date.

Enter the dollar amount of savings that were realized this reporting period through implementation of this waste reduction action. Do not include cost of implementation in the calculation. All the savings achieved from changes in disposal, packaging, handling, and administrative costs should be considered.

Programmatic Entry?:

Programmatic activities are extremely valuable in changing the culture of how the Department conducts business; allows sites to be recognized for conducting these types of activities; and therefore, should be entered into the data base as Accomplishments. Programmatic activities are defined as those activities that do not result in directly quantifiable waste reductions and cost savings. Examples include training, outreach, public awareness, research and development, conduct of pollution prevention opportunity assessments, infrastructure development, and recognition awards. In addition, other pollution prevention activities for which a waste reduction cannot be quantified, but which actually reduced waste or resulted in a cost savings for the site, can also be reported as a Programmatic Activity. These activities include the donation of miscellaneous materials (computers, computer software, office furniture, etc.) to schools, research institutions, etc., which resulted in the site not having to

dispose of the materials; and the use of the Material Exchange data base to transfer excess material to other DOE sites. It should be noted that for the above listed examples, if the waste reduction is known, these activities can be reported as Recycle/Reuse.


Programmatic activities are tracked separately for inclusion in the Annual Report. They are not tracked as part of those activities that reduce waste and do not receive credit for waste reduction or cost savings in the overall rollup.

Estimated Dollar Savings for Next 10 Years:

Note- This is an essential reporting element.

Enter the dollar amount of savings that are anticipated over the next 10 years or the life of the activity if less than 10 years. Do not include cost of implementation in the calculation. All the savings achieved from changes in disposal, packaging, handling, and administrative costs should be considered.

Status Report

A help screen is available for each input element. Simply click on the  [Help] help button next to the input text.

Please supply the following information:

 Facility Name: WMH P2

Fiscal Year:

Quarter: ☒ 1st ☐ 2nd ☐ 3rd ☐ 4th

 Planned Budget

 Actual Budget

 Full Time Equivalents (FTEs)


 Status on Secretarial Goals:

--

The Following fields are optional. Any input you provide will be appreciated.

 Status on Facility's Goals:

--

 Status on Waste Minimization Assessments Conducted:

--

? Planned opportunities identified through P2 in Design:

? Comments:

Submit Information **Reset Values**

Note: Clicking the "Reset Values" box will clear (erase) all data you have entered in the current form.

[Top of Document] or [Top of Form]

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For specific questions or comments see our [Contacts List](#) or send feedback to David Nichols.
URL: <http://p2eg103.rl.gov/p2gpmw/areportalsidus/addform.asp>

E1.1.2 Guidance for Quarterly Status Report

Help items for the Quarterly Status Report are provided below.

Facility Name:

Select the name of the Facility where the reduction/recycling/treatment occurred. If the facility does not appear in the list then leave blank. The facility name can be added by including it in the "Activity Description" field below.

Fiscal Year:

Enter applicable FY.

Quarter:

Select applicable reporting quarter.

Planned Budget:

Please provide the amount, in dollars, planned for waste minimization activities for reporting period.

Actual Budget:

Please provide the amount, in dollars, actually spent for waste minimization activities during reporting period.

Full Time Equivalents (FTEs):

Please provide the number of full time equivalents (FTEs) involved in waste minimization activities during the reporting period.

Status on Secretarial Goals:

For each of the wastes listed below provide 1) Baseline data or basis for the goal, 2) statement of the goal, and 3) status as of the end of the reporting period in achieving that goal.

- Routine low-level radioactive waste
- Routine low-level mixed waste

- Routine hazardous waste
- EPCRA 313 toxic chemicals releases and offsite transfers from routine operations (pertains to chlorine only)
- Sanitary waste from all activities

Example for a second quarter status report for FY97:

No LLW was generated by the facility in 1993. However 25 cubic meters of LLW waste was generated during the previous (FY96) fiscal year due to routine activities. A goal was established for FY97 to keep the generation of LLW at or below the amount generated during the previous FY. During the first quarter 12 cubic meters of LLW were generated and 2 cubic meters were generated during the second quarter. Operations is projecting that they will generate 12 cubic meters during the remainder of the fiscal year.

The status report may contain:

Routine LLW: 1) FY96 generated quantity (25 cubic meters) was the basis of the goal. 2) Goal was not to exceed the FY96 quantity. 3) A total of 14 cubic meters have been generated to date. It is anticipated that the goal will be exceeded by 1 cubic meter.

Status on Facility's Goals:

This is an optional reporting element and does not include the status towards achieving the Secretary of Energy goals.

Please provide for each goal:

- a brief statement of the goal
- current status in attaining that goal.

Status on Waste Minimization Assessments Conducted:

This is an optional reporting element.

List the title of each PPOA completed during this reporting period. Indicate if this assessment has been made available to all Hanford contractors by adding it to the PPOA database.

Planned Opportunities Identified through P2 in Design:

If you have identified opportunities through P2 in design, provide a description and a projected implementation date.

Update this item in future quarterly reports only if the status changes.

Comments:

The comment field is used to document information that you wish to have included in your files. It will be maintained in the Pollution Prevention database for you. However, the information is not reviewed by the P2/WMin Group nor used in any of the rollup reports prepared by the P2WMin group.

APPENDIX F

WASTE MINIMIZATION CERTIFICATION FORM

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WASTE MINIMIZATION CERTIFICATION FORM

CERTIFICATION:

Facility or Contractor Name(s):

For the facility(ies) listed above, I certify that a waste minimization program is in place to reduce the volume and toxicity of hazardous waste that the facility(ies) generates to the degree determined to be economically practicable; and the proposed method of treatment, storage, and disposal is that practicable method currently available which minimizes the present and future threat to human health and the environment.

Manager: _____
(Printed name and signature)

Title: _____

Company: _____

Date: _____

This form should be signed and kept on file with generator pollution prevention documentation.

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