

**WESTERN STATES REGIONAL AGREEMENT  
WASTE MINIMIZATION SUBMISSION  
FEBRUARY 1991**

Prepared for:

**United States Environmental Protection Agency  
Washington, DC**

Submitted by:



**Western Governors' Association**  
600 17th Street  
Suite 1705 South Tower  
Denver, Colorado 80202-5442  
(303) 623-9378

**February 1991**



Western Governors' Association  
600 17th Street  
Suite 1705 South Tower  
Denver, Colorado 80202-5442  
(303) 623-9378  
FAX (303) 534-7309

George Mickelson  
Governor of South Dakota  
Chairman  
Michael Sullivan  
Governor of Wyoming  
Vice Chairman  
James M. Souby  
Executive Director

February 13, 1991

TO: Regional Coordinators  
Capacity Assurance Planning  
U.S. Environmental Protection Agency  
Region VIII  
Region IX  
Region X

FROM: Ronald W. Ross   
Program Manager

SUBJECT: Hazardous Waste Minimization Plans for Those Western States Which  
Participate in the Western Regional Agreement

This report on western states' hazardous waste minimization strategies is submitted in fulfillment of the Supplemental Conditions placed on the approval of those states participating in the Western Governors' Association Regional Capacity Assurance Agreement for Hazardous Waste. The report provides both a regional overview of the states' activities and a summary submitted by each state.

This report is submitted on behalf of all the western states in compliance with their individual supplemental conditions.

I am available to respond to any questions regarding this submission.

# # # # #



## TABLE OF CONTENTS

### Letter of Transmittal

Purpose .....	1
Overview .....	1
Summary of Waste Minimization Program Activities .....	2
Mandatory Programs .....	2
Voluntary Formal Programs .....	3
Voluntary Informal Programs .....	3

### Attachments

Waste Minimization Submissions from the western states. They appear by the type of waste minimization programs they have adopted.

Oregon	A
Washington	B
Alaska	C
Colorado	D
Hawaii	E
Idaho	F
Nevada	G
California	H
Montana	I
North Dakota	J
South Dakota	K
Utah	L
Wyoming	M

## Purpose

This report provides a regional overview of waste minimization programs in those western states participating in the Western Governors' Association regional capacity assurance agreement (circa 1989).<sup>1</sup> This report is submitted to the Environmental Protection Agency (EPA) in fulfillment of the waste minimization reporting requirement included as part of the supplemental conditions imposed upon the states by EPA regional offices. These supplemental conditions were made as part of EPA's approval of the individual states' capacity assurance plans.

The first section of the report describes the context within which WGA is making this report and provides a brief overview of the individual state submissions. This text is followed by thirteen attachments which provide the complete text of the individual state submissions. The states included in this report are: Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

## Overview

In 1986, the United States Congress amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) with a provision which required each state to provide "adequate assurance" that treatment and disposal capacity will be available for the hazardous waste generated within the state during the twenty-year period following the date of assurance. Additionally, Section 104(c)(9) stipulated that, after October 17, 1989, no Superfund remedial action monies can be provided to a state unless it has offered such an assurance.

The member states of the Western Governors' Association (WGA) identified the Section 104(k) requirements as highly complex and requiring a regional approach. WGA in August 1988 received a grant from EPA to provide both direct financial and technical assistance to member states for the purpose of complying with the CERCLA requirements. WGA also developed and implemented a regional approach for the western states' capacity assurance, including the preparation of individual state and regional capacity data and capacity assurance plans. These state and regional capacity assurance plans were submitted in 1989 to EPA Regions VIII, IX and X for approval.

In approving the individual states' capacity assurance plans, EPA imposed supplemental conditions which required the states to undertake specific activities designed to enhance hazardous waste data and future capacity assurance plans. One specific supplemental condition is the requirement that states develop a hazardous waste minimization strategy.

---

<sup>1</sup> Thirteen western states originally participated in the Western Governors' Association capacity assurance agreement: Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming. In 1990 the states of Kansas and New Mexico requested to participate in the western agreement. They will be incorporated into the regional capacity assurance data and plan as part of the 1991 update.

WGA Capacity Assurance Update  
Waste Minimization Submission  
February 13, 1991

The state strategies are to identify a program development plan that includes requiring facilities to assess the opportunity for waste minimization through permits, through manifest compliance inspections, and through creating incentives to minimize waste. States also are to identify in the strategy other activities that will be undertaken to encourage waste minimization by hazardous waste generators. This report provides information on all western agreement states' waste minimization activities in fulfillment of this supplemental condition.

For purposes of presentation, states have been categorized into one of three program categories: mandatory, voluntary formal, and voluntary informal programs. A program is categorized as mandatory if it operates under legislative authority requiring hazardous waste generators to undertake specified waste minimization activities. With the exception of such legislative requirements, mandatory programs tend to share many characteristics of voluntary programs (as discussed below).

Voluntary programs are those which have no legislative mandate requiring waste minimization efforts on the part of hazardous waste generators. Within this category, however, two types of programs can be distinguished: formal and informal. A formal program is defined as one which has discreet and formal resources, staff, and activities, independent of other regulatory programs within the relevant agency. Informal programs are those which have no discreet resources; waste minimization activities are incorporated into on-going staff responsibilities with no specific program presence being established.

Within each category - mandatory, voluntary formal, and voluntary informal - state programs are summarized generally, drawing upon the commonalities in or ranges of the activities undertaken by the programs. Specific details of individual state programs are provided as attachments A through M. The states are listed according to the level of hazardous waste minimization programming they have adopted. The text in these attachments was prepared by the individual states and constitutes their submission to EPA in accordance with their individual waste minimization supplemental conditions.

### Summary of Waste Minimization Program Activities

#### **Mandatory Programs**

Oregon and Washington both recently enacted legislation requiring generators of hazardous waste, in amounts exceeding specified thresholds, to develop waste minimization plans. Oregon's legislation includes the requirement that the hazardous waste generators develop two and five-year performance goals as part of their planning process. Washington's

legislation levies two fees which will help fund the state's waste minimization program and provide funding to local governments for undertaking technical assistance and compliance education for small quantity generators. Both state programs offer telephone hotline assistance and on-site technical assistance. On-going efforts also include developing printed fact sheets, guidance manuals, and case studies; maintaining an information clearinghouse; and conducting workshops for targeted industries. Please refer to Attachments A and B for further details of the programs in Oregon and Washington.

### **Voluntary Formal Programs**

The States of Alaska, Colorado, Hawaii, Idaho, and Nevada are in various stages of developing or operating formal waste minimization programs. Colorado and Hawaii are in the process of hiring one full time employee (FTE) each for their programs. Surveys of the regulated universe undertaken by Alaska, Colorado, Hawaii, and Nevada are assisting those states to refine their developing programs. The surveys act to highlight the specific needs of particular industries on the basis of the types and quantities of hazardous waste generated within the states. Idaho is sponsoring three pilot projects to address its specific concerns, including community and state office recycling programs. An activity common to many of the state programs, including Alaska, Colorado, and Hawaii, is investigating the inclusion of waste minimization concerns in hazardous waste compliance inspections and enforcement efforts. Attachments C, D, E, F, and G provide each state's submission.

In addition to its on-going waste minimization program efforts, California has recently initiated a waste minimization project targeting incinerable wastes. California selected this waste stream for special focus because it has insufficient treatment and disposal capacity for these wastes, as documented in their 1989 Capacity Assurance Plan. The two-year program encourages the historically largest generators to enter into a voluntary agreement with the California Toxic Substances Control Program for staff assistance in implementing waste minimization programs at the facilities. Non-participating companies will be monitored for the effectiveness of their unilateral efforts; waste minimization language will be included in their permit renewals and modifications, and in corrective action orders and enforcement agreements. Attachment H provides California's submission.

### **Voluntary Informal Programs**

The states of Montana, North Dakota, South Dakota, Utah, and Wyoming have incorporated waste minimization activities into their existing hazardous waste management programs. Each of the states is undertaking different types of needs assessments or analyses of the regulated universe to determine the potential for waste minimization, especially within a limited number of large-generator industries. The results of these efforts will assist

WGA Capacity Assurance Update  
Waste Minimization Submission  
February 13, 1991

the states in modifying the focus of their waste minimization activities to better serve the needs of the regulated universe. In addition, regulatory staff in Montana, North Dakota, South Dakota, and Wyoming are receiving training in identifying waste minimization opportunities during routine hazardous waste compliance inspections, and/or in incorporating waste minimization clauses in permits and enforcement actions.

Ongoing activities of the states' waste minimization efforts include providing technical assistance, including workshops and seminars, for targeted industries. Educational activities include: mailings to notifiers to share with them EPA and other publications on such topics as the environmental and economic benefits of waste minimization; and the utilization of media, such as trade association publications and other newsletters, to provide current information to members of industry. Attachments I, J, K, L, and M provide the states' submissions.

**ATTACHMENT A**

**STATE OF OREGON**



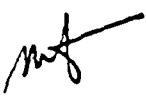
STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMORANDUM

DATE: November 19, 1990

TO: Roy Brower

FROM: Marianne Fitzgerald 

SUBJECT: CAP Update Worksheet

I've reviewed the CAP Update Worksheet for Waste Minimization Initiatives sent through the Western Governors Association. Here's a draft response, adapted to our program as best I could:

1. No Public Sector Waste Minimization Initiatives:

Not applicable.

2. Program Needs Assessment/Planning in Progress:

Not applicable. Program has been in place since 1987.

3. Legislative/Executive Support for Waste Minimization Efforts:

The Oregon Legislature enacted the Toxics Use Reduction and Hazardous Waste Reduction Act in 1989. The law requires that all large toxics users, large quantity hazardous waste generators and small quantity hazardous waste generators develop plans to reduce the amount of toxics used and hazardous waste generated at their facilities.

Reduction plans are due on September 1, 1991 for large users and generators, and September 1, 1992 for small quantity generators. The baseline year is the year preceding the plan deadline. The plans will include performance goals for reducing toxics and wastes for a two year and a five year period (1992 and 1995 for large users and generators; 1993 and 1996 for small generators).

4. Program Authorization:

Oregon's toxics use reduction and hazardous waste reduction program is authorized by the Oregon Legislature under ORS 465.012. The program has not yet been submitted to EPA for authorization under the HSWA amendments, although we are planning to do so in 1991.

5. Program Implementation:

In addition to the activities described in #6 below, we are planning on expanding our technical assistance program

Memo to: Roy Brower  
November 19, 1990  
Page 2

to include on-site assistance to help users develop reduction plans. Also, we are developing an awards program to recognize successful reduction efforts.

6. On-going Program in Place:

The DEQ has had a hazardous waste reduction technical assistance program in place since 1987. Some of the on-going programs include:

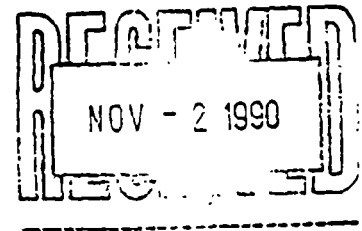
- information clearinghouse
- technical library and published bibliography
- telephone hotline assistance
- printed fact sheets, guidance manuals and case studies
- hazardous and solid waste resources directory
- technical workshops

One of the most effective portions of our program is the training workshops. We have sponsored or participated in over 25 workshops in 1990 and provided training to over 750 persons. Also, we have provided telephone assistance to over 185 persons during the past year.

The worksheet does not include any estimation of waste minimization achieved or projected to be achieved. We should add a statement that our law requires us to monitor the use of toxic substances and the generation of hazardous waste and report back to the legislature in 1993 on the effectiveness of the toxics use reduction and hazardous waste reduction program. We are participating in a regional study on measuring the effectiveness of reduction programs which is expected to make its recommendations sometime in 1992.

**ATTACHMENT B**

**STATE OF WASHINGTON**



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

November 1, 1990

TO: Rob Greenwood, Ross and Associates  
FR: Susan Ridgley  
SUBJECT: Monitoring Capacity Assurance Efforts

Apologies for being late on this update. It's surprisingly difficult to pull this kind of information together, which is one of the reasons why we'll be using some of our 1990 EPA CAP funding to create an "integrated capacity database". So hopefully, this will get easier over time.

As I mentioned to you on the phone, I had a hard time with your survey form. In lieu of that, I have taken leave to send the information in a form that was simpler for me.

I. New TSD Capacity

There is a flow chart and supplementary information enclosed for each of the proposed new RCRA facilities (Attachments 1, 2, and 3). Obviously, the highlighting indicates the current status of the particular facility.

I have not included any packet for the two proposed Hanford facilities. Although they were reflected in the original Western capacity tables (11,547 tons each of aqueous organic and inorganic treatment, and 172,800 tons of stabilization), these facilities will only accept radioactive and mixed radioactive wastes. I still think inclusion of that capacity in the aggregated tables is somewhat misleading (although in keeping with EPA's guidance). All RCRA-only wastes generated at Hanford will continue to need off-site management.

The only important change in status during the past year that is not reflected by the enclosed materials is in Rabanco's proposal (Grant County Waste Management Facility). Their original permit application consisted of an incinerator of approximately 35,000 tons per year; the revised permit application includes a proposed capacity increase to 74,000 tpy. They have also definitely dropped the landfill portion of the application, although that proposal wasn't reflected in the WGA tables anyway.

II. Existing TSDs

No TSDs ceased operation during the last year, nor are there any planned closures at existing TSDs that would impact capacity (that I know of -- this was an area where the information is widely scattered). Three of the planned closures for 1991 are at TSDs which were part of the original TSDR survey, but all consisted

of storage tanks or surface impoundments which do not contribute to treatment or disposal capacity.

### III. Siting Criteria

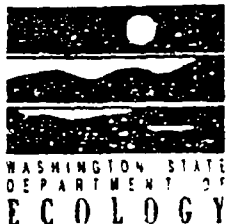
The only other activity which occurred during the last year which may impact current or future capacity is the completion and promulgation of the siting criteria (Attachment #4). These regulations apply to both proposed new facilities and expansions of existing facilities. The regulations became effective on October 22, 1990 and affected facilities must demonstrate their compliance with these regulations within 90 days. The impact of these regulations is not fully known at this time.

### IV. Waste Minimization Initiatives

Washington had a well-developed waste reduction and recycling program at the time of CAP submittal, and the program has continued to evolve at a rapid pace. Probably the most significant action in the past year was the passage of ESHB 2390. Attachment #5 provides a brief summary of the this act - its impact on waste generators is expected to be far-reaching.

In addition, Ecology's waste reduction program has been growing rapidly as it utilized the funding which resulted from the passage of SB1340 during the 1989 legislative session. The number of Ecology staff engaged in waste minimization activities has approximately doubled in the last year. These staff have continued to develop workshops and manuals to assist waste generators, and to provide grants to local governments and others to encourage waste reduction and recycling. Finally, many staff are involved in innovative research in these areas as well.

Please let me know if you need further information on Ecology's programs or the status of TSD facilities.



# Focus

## HAZARDOUS WASTE REDUCTION ACT

---

### New law sets 50 percent reduction goal

The 1990 Legislature, in ESHB 2390, set a state policy to encourage reduction of hazardous substance use and hazardous waste generation whenever economically and technically practicable. The Legislature adopted a goal of reducing the generation of hazardous waste by 50 percent by 1995.

The primary method the new law utilizes to achieve this goal is requiring large hazardous waste generators and hazardous substance users to prepare plans for voluntarily reducing use of hazardous substances and hazardous waste generation. The act also provides grants to local governments for small quantity generator technical assistance and compliance education. Two fees are established. The first is a base fee imposed upon every known and potential generator of hazardous waste doing business in Washington. An additional fee will be assessed the hazardous waste generators and hazardous substance users required prepare plans.

### Who must prepare a reduction plan?

---

Facilities required to report under SARA Title III, Section 313, or who generate in excess of 2,640 lbs. of hazardous waste per year are required to prepare comprehensive hazardous substance use/ hazardous waste reduction plans. These plans will need to address, in part, specific questions about current use and waste generation practices, current hazardous substance use, waste reduction, recycling, and treatment activities, five-year performance goals, and realistic opportunity/ impediment analyses. Ecology must adopt a rule guiding preparation of the plans by April 1, 1991.

### New Hazardous Waste Fees

---

A new hazardous waste fee of \$35 will be assessed to all known and potential hazardous waste generators. An additional fee will be charged to those facilities required to submit plans. This fee will be established by rule.

### Technical Assistance to Business and Industry

---

Ecology will provide advice and consultation on waste reduction and hazardous substance use reduction techniques, assistance in preparation or modification of plans, executive summaries, and annual progress reports, and provide assistance in the implementation of the plans.

### Grants to Local Governments

---

Ecology will provide grants to local government for small quantity generator technical assistance and compliance education as described by the local agency's moderate risk waste plans. This grant program will be combined with a hazardous waste implementation grant program funded by the Local Toxics Account.

---

## **Penalties for Non-Compliance**

---

Ecology may assess a penalty if a hazardous substance user or hazardous waste generator fails to complete an adequate plan, submit an adequate executive summary or annual progress report, or pay the fee.

## **For More Information**

---

Contact:      Waste Reduction, Recycling and Litter Control Program  
Washington Department of Ecology  
Mail Stop PV-11  
Olympia, WA 98504-8711  
(206) 438-7541

Waste Reduction, Recycling and Litter Control Program  
Washington Department of Ecology  
Mail Stop PV-11  
Olympia, WA 98504-8711



# Focus

## DANGEROUS WASTE SITING CRITERIA

---

### Proposed Rules Establishing Criteria For The Siting Of Dangerous Waste Management Facilities

On May 2, 1990, the Department of Ecology filed its proposed criteria for siting dangerous waste management facilities. These criteria will become part of the state's dangerous waste regulations (Chapter 173-303 WAC).

#### The Reason For The Proposed Rules

Ecology has been working for several years to develop statewide siting criteria for dangerous waste management facilities. These criteria will be used in the early stages of developing a project so that locations which are unsuitable are disqualified from further consideration.

Washington's Hazardous Waste Management Act requires companies proposing such facilities to submit applications for a state permit. The permit process is lengthy, to be sure a successful application protects both the environment and human health. These proposed siting criteria would be used to immediately disqualify proposed sites which are unsuitable or inappropriate.

A proposed site which is not disqualified by the siting criteria still must go through the state's permitting process. Here it would be subject to rigorous site-specific requirements and environmental studies before a decision is made on its suitability.

#### How the proposed criteria were developed

Siting a dangerous waste management facility is difficult. There generally is little support and a lot of opposition by people who live near a proposed site. Ecology's efforts have been complicated by the fact that two proposed hazardous waste management facilities are now in various stages of the permitting process. Both will be subject to the new siting criteria.

We knew we could develop successful criteria only if we had a logical, deliberate process with continuous interaction from the public. Ecology has held 39 public hearings and workshops and mailed many documents, notices and press releases. While these draft rules don't include all the public's suggestions, we seriously considered all comments.

Ecology staff has looked at all other states' and several other nations' hazardous waste siting criteria and a consultant has prepared extensive technical information memoranda for every aspect of the environment.

#### Highlights of the proposed siting criteria

The proposed criteria will apply to all new dangerous waste management facilities, including those proposed by Rabanco and ECOS companies. The criteria will also apply to expansions of more than 25% capacity of existing facilities.

The criteria are, for the most part, exclusions or setbacks. A company proposing a dangerous waste management facility will be able to look at a map and determine, without extensive on-site work, if that site meets the statewide criteria.



---

Compliance with the siting criteria does not imply that a given project at a given location poses an acceptable level of risk, nor does it commit the department to the issuance of a dangerous waste permit. However, they will provide some level of protection to human health and the environment. Additionally, the department will review a very comprehensive evaluation of site specific characteristics during the permit and SEPA process before taking action on a dangerous waste permit.

The criteria will require that dangerous waste management facilities be excluded from areas subject to natural hazards such as flood plains and unstable soils. They will also require that dangerous waste management facilities be excluded from certain environmentally or culturally sensitive areas such as sole source aquifers and designated historic areas.

Setback distances are proposed between facilities and certain resources or places. Land disposal facilities, for instance, must be located at least 1/4 mile from perennial surface water bodies.

For container storage, tank storage, incineration facilities (nonland-based), the other minimum requirements are:

- 500 feet from surface water, dwellings and wells.
- 500 feet from prime farmland, wetlands, parks and wilderness areas
- 10 feet above groundwater

For land-based facilities (e.g. landfills, waste piles, surface impoundments), the other minimum requirements are:

- One-fourth mile from surface water, dwellings and wells
- One-fourth mile from prime farmland, wetlands, parks and wilderness areas
- 50 feet above groundwater
- Not within the 500-year flood plain

For incinerators, the other minimum requirements are:

- 500 feet from surface water, wells, prime farmland, wetlands, parks, and wilderness areas
- 10 feet from groundwater
- one-fourth mile from dwellings.

The proposed siting criteria also require that nonland-based facilities be 200 feet from the facility's property boundary. Land-based facilities must be 500 feet from the property boundary.

## New Site Specific permitting requirements.

The proposed siting criteria are part of a protection package. Ecology also is proposing additional site-specific permitting requirements. The new requirements are:

- **Groundwater protection:** In addition to current groundwater monitoring required beneath a disposal unit, new studies would be required regarding the geohydrological conditions beneath the disposal unit to the nearest property boundary. An applicant would have to develop a contingent groundwater remediation plan which would insure that contaminants would never reach the property boundary.
  - **Resource protection and public involvement.** This regulation would apply to all proposed incinerators. It includes:
    - The applicant must develop an outdoor air monitoring program and test the air before the facility begins operation. These data would be used to measure air, water, soils and plants to determine if the operating facility is impacting the environment.
    - The applicant must develop, with the community, methods to allow community review of facility monitoring results.
    - The applicant must submit an impact mitigation plan which demonstrates a satisfactory plan to mitigate all probable significant impacts because of facility location and operations.
-

- Seismic risk consideration. This regulation requires a project proponent to demonstrate that the dangerous waste management facility can and will be designed to resist ground motion resulting from earthquakes.
- The department is also clarifying a project proponents responsibility to coordinate preparedness and prevention planning and contingency planning efforts with local emergency planning committees pursuant to Title III of the 1986 Superfund Amendments and Reauthorization Act.

## **Public Hearings Planned**

---

Public hearings will be held at 7 p.m. at:

**Bellevue:** Tuesday, June 5, King County Building and Land Division, Hearing Room 2, 3600 136th Place SE.

**Bellingham:** Wednesday, June 6, Whatcom County Courthouse Chambers, 311 Grand.

**Kelso:** Thursday, June 7, Kelso High School Conference Room.

**Tacoma:** Monday, June 11, Tacoma World Trade Center Main Conference Room, 3600 Port of Tacoma Road.

**Spokane:** Tuesday, June 12, Spokane Health Department Auditorium, Room 140, 1101 College Street

**Ritzville:** Wednesday, June 13, Adams County Courthouse, 210 West Broadway

**Moses Lake:** Thursday, June 14, Big Bend Community College, Student Center Auditorium.

## **For More Information**

---

Contact Curtis Dahlgren, Department of Ecology, Mail Stop PV-11, Olympia, WA 98504 (206) 438-7595

AMENDATORY SECTION (Amending Order 88-29, filed 9/6/88)

WAC 173-303-281 NOTICE OF INTENT. (1) Purpose. The purpose of this section is to provide notification to the department, local communities and the public that the siting of a dangerous waste management facility is being considered. Also, to provide general information about the proposed facility owner/operator, the type of facility and the types of wastes to be managed and compliance with the siting ((standards)) criteria.

(2) Applicability. This section applies to owners ((and)) operators of proposed facilities. This section also applies to ((owners and operators of)) existing facilities ((with interim or final status)) for which the department receives an application for expansion. This section does not apply to owners/operators of facilities or portions of facilities who are applying for research, development and demonstration permits, pursuant to section 3005(g) of the Resource Conservation and Recovery Act, codified in 40 CFR Part 270.65. In addition, this section does not apply to owners/operators of facilities operating under an emergency permit pursuant to WAC 173-303-804 or to persons at facilities conducting on-site cleanup of sites under the Comprehensive Environmental Response Compensation and Liability Act, chapter 70.105 RCW, or chapter 70.105D RCW, provided the cleanup activities are being conducted under a consent decree, agreed order, or enforcement order. As used in this section:

(a) "Proposed facility" means a facility ((that does not have interim or final status on the effective date of this section, and for which the owner/operator applies for an interim or final status permit, under WAC 173-303-805 or 173-303-806, after)) which has not qualified for interim status under WAC 173-303-805 or for which the department has not issued a final facility permit under WAC 173-303-806 prior to the effective date of this section;

(b) "Existing facility" means a facility ((for which an interim or final status permit has been issued by the department pursuant to WAC 173-303-805 or 173-303-806)) which has qualified for interim status under WAC 173-303-805 or for which the department has issued a final facility permit under WAC 173-303-806 prior to the effective date of this section; and

(c) "Expansion" means the enlargement of the land surface area of an existing facility from that described in an interim status permit application or final status permit, the addition of a new dangerous waste management process, or an increase in the overall design capacity of existing dangerous waste management processes at a facility. ((However, a process or equipment change within the existing handling code--(not to include "other") as defined under WAC 173-303-380-((2))((4)) will not be considered a new dangerous waste management process.

This section does not apply to owners/operators of facilities or portions of facilities applying for research, development and demonstration permits, pursuant to section 3005(g) of the Resource Conservation and Recovery Act, codified in 40 CFR Part 270.65, in addition, this section does not apply to mobile facilities for on-site cleanup at treatment, storage or disposal facilities undergoing closure, facilities operating under an emergency permit pursuant to WAC 173-303-804, or facilities for on-site cleanup of sites under the Comprehensive Environmental Response Compensation and Liability Act, or chapters 70.105, 70.105D and 90.48 RCW.)

(3) Notice of Intent to file for an interim status or a dangerous waste permit.

(a) The notice of intent to be prepared by the owners/operators of the applicable facilities shall consist of:

(i) The name, address, and telephone number of the owner, operator, and corporate officers;

(ii) The location of the proposed facility or expansion on a topographic map with specifications as detailed in WAC 173-303-806 (4)(a)(xviii);

(iii) A brief description of the types and amounts of wastes to be managed annually;

(iv) A brief description of the major equipment items proposed, if any, and the waste management activities requiring a permit or revision of an existing permit;

(v) An environmental checklist from the State Environmental Policy Act rules, chapter 197-11 WAC;

(vi) ~~((Documentation that the proposed facility or expansion site meets the requirements of WAC 173-303-020, Siting standards. Preliminary ground-water characterization based on available data shall also be provided;))~~ Demonstration of compliance with the siting criteria as required under WAC 173-303-282 (6) and (7). The site conditions with regards to satisfying the criteria are to be assessed as of the date of submittal of the notice of intent to the department.

(vii) For informational purposes a complete summary of compliance violations of permit conditions at hazardous waste management facilities owned or operated by the applicant, its subsidiaries or its parent company, during the ten calendar years preceding the permit application. Along with the summary of compliance violations, as issued by appropriate state or federal regulatory agencies, the applicant shall also submit responses to past violations and any written correspondence with regulatory agencies regarding the compliance status of any hazardous waste management facility owned or operated by the applicant, its subsidiaries or parent company of the owner or operator. A more detailed compliance record must be provided upon request by the department;

(viii) For informational purposes the need for the proposed facility or expansion shall be demonstrated by one of the following methods:

(A) Current overall capacity within Washington is inadequate for dangerous wastes generated in Washington as determined by regional or state dangerous waste management plans; or

(B) The facility is a higher priority management method, as described in RCW 70.105.150, than is currently in place or practical and available for the types of waste proposed to be managed; or

(C) The facility will add to the types of technology available or will reduce cost impacts (not to include transportation costs) to Washington generators for disposal of dangerous wastes; and

(ix) For informational purposes it shall be shown how the capacity of the proposed facility or expansion will affect the overall capacity within the state, in conjunction with existing facilities in Washington.

(b) The notice of intent shall be filed with the department, and copies shall be made available for public review, no less than one hundred fifty days prior to filing an application for a permit or permit revision. Public notification of the notice of intent to file shall be given at the time of filing by announcement in a daily newspaper within the area of the proposed facility or expansion for a minimum of fourteen consecutive days. In addition, the department shall send a copy of the notice of intent to the elected officials of the lead local government and all local governments within the potentially affected area as required by WAC 173-303-902 (5)(b)(i). The department will continue to coordinate with interested local governments throughout the review of the proposal.

(c) Reserved.

#### NEW SECTION

WAC 173-303-282 SITING CRITERIA. (1) Purpose. This section establishes siting criteria which serve as an initial screen in the consideration of sites for dangerous waste management facilities. The purpose of the siting criteria is to immediately disqualify proposed dangerous waste facility sites in locations considered unsuitable or inappropriate for the management of dangerous wastes. Under RCW 70.105.200 (1)(d), siting criteria cannot prevent existing dangerous

waste management facilities from operating at or below their present level of activity.

A proposed site which is not disqualified under these criteria will be further studied to determine if it qualifies under site specific rules. Compliance with the siting criteria does not imply that a given project at a given location poses an acceptable level of risk, nor does it commit the department to the issuance of a dangerous waste permit. Projects that demonstrate compliance with the siting criteria will be subjected to comprehensive environmental and technical review pursuant to applicable laws and regulations before the department makes a final decision on a dangerous waste permit.

The department may deny a permit or require protective measures such as engineering enhancements or increased setback distances from resources in order to ensure protection of human health and the environment.

(2) Applicability.

(a) This section applies to:

- (i) Owners/operators of proposed facilities; and
- (ii) Owners or operators of existing land-based facilities at which an expansion is proposed;
- (iii) Owners or operators of existing incinerators at which an expansion is proposed; and
- (iv) Owners or operators proposing a significant expansion of other existing dangerous waste management facilities not subject to (a)(i), (ii) and (iii) of this subsection, unless the owner/operator can demonstrate to the satisfaction of the department that the proposed expansion will provide a net increase in protection to human health and the environment beyond that which is currently provided at the facility. However, demonstrations under this subsection (iv) shall not result in treatment or storage facilities expanding into land-based or incineration facilities if siting criteria cannot be satisfied.

(b) This section does not apply to:

- (i) Owners/operators of facilities or portions of facilities who are applying for research, development and demonstration permits, pursuant to section 3005(g) of the Resource Conservation and Recovery Act, codified in 40 CFR Part 270.65;
- (ii) Owners/operators of facilities operating under an emergency permit pursuant to WAC 173-303-804;
- (iii) Persons at facilities conducting on-site cleanup of sites under the Comprehensive Environmental Response Compensation and Liability Act, chapter 70.105 RCW, or chapter 70.1050 RCW, provided the cleanup activities are being conducted under a consent decree, agreed order, or enforcement order, or the department or United States Environmental Protection Agency; or
- (iv) Persons managing solid wastes who become subject to dangerous waste regulations through amendments to this chapter after the effective date of this section. This provision applies only to those activities conducted prior to becoming subject to dangerous waste regulations, chapter 173-303 WAC or expansions, if it can be demonstrated to the satisfaction of the department that the proposed expansion will provide a net increase in protection to human health and the environment beyond that which is currently provided at the facility.

(3) Definitions. Any terms used in this section that are not defined below shall have the meanings provided in WAC 173-303-040. For the purposes of this section, the following terms shall have the described meanings:

(a) "Aquifer of beneficial use" means an aquifer that contains sufficient quality and quantity of water to allow it to be withdrawn for beneficial uses which include, but are not limited to, uses for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, or recreational purposes.

(b) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(c) "Domestic water use" means any water used for human consumption, other domestic activities or livestock watering for which the

department has issued a permit of water right for surface water diversions pursuant to chapter 90.03 RCW, or for a well pursuant to chapter 90.44 RCW, or for which the department has received a well water report pursuant to RCW 18.104.050, or for any other valid water right claimed in accordance with chapter 90.14 RCW. This does not apply to wells abandoned in compliance with chapter 173-160 WAC.

(d) "Existing facility" means a facility which has qualified for interim status under WAC 173-303-805 or for which the department has issued a final facility permit under WAC 173-303-806, prior to the effective date of this section.

(e) "Expansion" means the enlargement of the land surface area of an existing facility from that described in an interim status permit application or final facility permit, the addition of a new dangerous waste management process, or an increase in overall design capacity of existing dangerous waste management processes at a facility. However, a process or equipment change within the existing handling code (not to include "other") as defined under WAC 173-303-380 (2) (d) will not be considered a new dangerous waste management process.

(f) "Fault" means a fracture along which rocks or soils on one side have been displaced with respect to those on the other side.

(g) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene to the present.

(h) "Land-based facility" means a dangerous waste management facility which falls under the definition of land disposal as defined in Section 3004(k) of the Resource Conservation and Recovery Act. These facilities include, but are not limited to, landfills, surface impoundments, waste piles, and land treatment facilities. For the purposes of this section, this would not include waste piles in which the dangerous wastes are stored inside or under a structure that provides protection from precipitation and when runoff, leachate, or other types of waste dispersal are not generated under any conditions.

(i) "Nonland based facility" means a facility which does not use the land as an integral part of its waste management method and is not subject to the requirements of WAC 173-303-806 (4) (a) (xi). These facilities include, but are not limited to, tanks, containers, and incinerators.

(j) "Perennial surface water body" means a surface water body which is normally continuous with natural flows throughout the year or an annually recurring body of water including lakes, rivers, ponds, streams, reservoirs, inland waters, and saltwaters. This does not include roadside ditches or storm drains. However, this definition does apply to irrigation or domestic water supply channels existing, or planned and approved by a governmental agency, at the time an owner/operator submits a notice of intent.

(k) "Preempted facility" means any facility that includes as a significant part of its activities any of the following operations: (i) Landfill; (ii) incineration; (iii) land treatment; (iv) surface impoundment to be closed as a landfill; or (v) waste pile to be closed as a landfill.

(l) "Prime farmland" means the land which has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops, and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. Prime farmland is not excessively erodible or saturated with water for a long period of time, and it either does not flood frequently or is protected from flooding. Prime farmland shall be determined by those general and specific criteria as defined in the National Soils Handbook, Soil Conservation Service, United States Department of Agriculture, Washington, D.C. and 7 CFR 2.62. Areas of prime farmland are identified in the most recent county soil survey maps prepared by the National Cooperative Soil Survey.

(m) "Proposed facility" means a facility which has not qualified for interim status under WAC 173-303-805 or for which the department has not issued a final facility permit under WAC 173-303-806 prior to the effective date of this section.

(n) "Public gathering places" means a place such as a public or private health care or child care facility; an educational institution; a church; a government institution not associated with dangerous waste management; or a retail shopping center.

(o) "Residence" means any dwelling including, but not limited to, private homes, rental homes, boarding houses, apartments, motels, or hotels.

(p) "Significant expansion" means an expansion of an existing facility, operating under interim status or a final status permit, that is considered a class three modification as designated by 40 CFR Parts 270.41 and 270.42. Examples include, but are not limited to, a modification or addition of container units resulting in greater than a twenty-five percent increase in the facility's container storage capacity, storage of different wastes in containers that require additional or different management practices from those authorized under interim status or by a final status permit, and a modification or addition of tank units resulting in greater than twenty-five percent increase in the facility's capacity. For the purposes of this section, a single or cumulative increase of greater than twenty-five percent of the process design capacity as described in the facility's original Part 1 permit application shall be considered a significant expansion.

(q) "Slope and soil instability" means areas for which there is credible evidence of, or the potential for, landslides, slumps, avalanches, earth or sand flows, or other unsuitable slope conditions.

(r) "Subsidence" means areas for which there is credible evidence of, or potential for, sinking of the land surface. Areas of subsurface mines, caves, cavernous materials, or where there has been significant removal of fluids may provide credible evidence of subsidence.

(s) "Wetland" means land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification a wetland must have one or more of the following three attributes: (i) At least periodically, the land supports predominantly hydrophytes; (ii) the substrate is predominantly undrained hydric soil; and (iii) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year. The Joint Federal Methodology for Identifying and Delineating Wetlands shall be used for defining the upland boundary of wetlands.

(u) Implementation.

(a) Submittal of information to demonstrate compliance. Documentation that a proposed facility or expansion site meets the siting criteria shall be submitted to the department:

(i) In the notice of intent for those facilities for which a notice of intent is filed after the effective date of this section; or

(ii) Within ninety days of the effective date of this section for proposed facilities for which a notice of intent or an application has been submitted to the department prior to the effective date of this section.

(b) Consultation by department. The department shall consult with the lead local government as defined in WAC 173-303-902 (4)(h) and consider those local land use, building, fire, air quality, and transportation standards to the extent they add to and do not conflict with the requirements of this section. Such consultation and consideration shall be made prior to the department's rendering of a tentative decision under subsection (5)(c) of this section.

(c) Response by department. Within sixty days of receipt of a demonstration of compliance, the department shall undertake one of the following actions:

(i) Return the demonstration of compliance as incomplete with written comments identifying the need for additional information. The

owner or operator may resubmit the demonstration of compliance with complete information; or

(ii) Render a written tentative decision to approve or deny the demonstration of compliance.

(d) Public notice and hearing process. The department in making a tentative decision to approve or deny a demonstration of compliance with this section shall take the following actions:

(i) For land-based facilities:

(A) The department shall publish a notice of its tentative decision in a daily or weekly newspaper of general circulation in the potentially affected area, and shall give notice by other reasonable methods to persons potentially affected.

(B) The department shall hold a public hearing at a location convenient to the public in the potentially affected area. Notice of the date, time, purpose, and place of the hearing shall be provided in the publication of notice.

(C) The department shall accept comments on its tentative decision for a minimum of forty-five days.

(D) After evaluating all public comments the department will make a final decision in accordance with chapter 34.05 RCW. The department will either approve or deny the owner/operator's demonstration of compliance.

(ii) For nonland-based facilities:

(A) The department shall publish a notice of its tentative decision in a daily or weekly newspaper of general circulation in the potentially affected area, and shall give notice by other reasonable methods to persons potentially affected.

(B) Upon the written request of any interested person, the department may hold a public hearing to consider public comments on the owner or operator's demonstration of compliance. A person requesting the hearing shall state the issues to be raised and explain why written comments would not suffice. In any case, if ten or more persons request a public hearing on the subject of the department's tentative decision, the department shall hold a public hearing for the purpose of receiving comments.

(C) The department shall accept comments on its tentative decision for a minimum of forty-five days.

(D) After evaluating all public comments the department will make a final decision in accordance with chapter 34.05 RCW. The department will either approve or deny the owner or operator's demonstration of compliance.

(5) Appeal of a department decision. Any person who is adversely affected by a decision of the department under this section may appeal the decision to the pollution control hearings board pursuant to the authority of WAC 173-303-845.

(6) Criteria for elements of the natural environment. The following siting criteria establish locations from which facilities are excluded and establish minimum setback distances from identified resources. Unless otherwise stated, setback distances are measured horizontally from the dangerous waste management unit boundary to the identified resource.

These criteria shall be used as an initial screening tool in the selection of sites which may be considered by the department for the purpose of managing dangerous waste. A more comprehensive evaluation of locational factors will occur during the department's review of a permit application. The department may deny a permit or impose additional setback distances or other permit requirements if necessary to protect human health and the environment.

(a) Earth. The intent of this subsection is to reduce the potential for the release of dangerous waste into the environment because of structural damage to facilities subject to the hazards identified below. The owner/operator shall provide supportive geologic, geotechnical, and soils information.

(i) Seismic risk. All dangerous waste management facilities shall be located such that the dangerous waste management unit boundary is located at least five hundred feet from a fault which has had displacement in Holocene times.



(ii) Subsidence. No dangerous waste management facility shall be located such that the dangerous waste management unit is within an area of subsidence.

(iii) Slope or soil instability. No dangerous waste management facility shall be located such that the dangerous waste management unit is within an area of slope or soil instability.

(b) Air. The intent of this subsection is to reduce the potential for further degradation of air quality in areas currently experiencing air quality impacts.

(i) Incineration facilities shall not be located in a Class I Prevention of Significant Deterioration Air Quality Zone designated under the Federal Clean Air Act.

(ii) Incineration facilities shall not be located in a nonattainment area designated by the department unless compensating emission offset can be achieved.

(iii) Proposed incineration facilities shall comply with WAC 173-303-806 (4) (a) (ixii) during the permitting process.

(c) Water. The intent of this subsection is to reduce the potential for contaminating waters of the state in the event of a release of dangerous wastes.

(i) Surface water.

(A) Flood, seiche, and tsunami protection.

(I) No dangerous waste management facility shall be located within the one hundred-year flood plain as indicated in the most current Federal Emergency Management Agency maps.

(II) The owner/operator of a nonland-based facility shall identify whether the facility is intended to be located within the five hundred-year flood plain, as indicated in the most current Federal Emergency Management Agency maps. Nonland-based facilities will require special design features so as to prevent flooding of the dangerous waste management unit in the event of a five hundred-year flood.

(III) Land-based facilities shall not be located within the five hundred-year flood plain as indicated in the most current Federal Emergency Management Agency maps.

(IV) Dangerous waste management facilities shall not be located in areas subject to seiches, or coastal flooding including tsunamis or storm surges as indicated in the most current maps of the National Flood Insurance Program of the Federal Emergency Management Agency.

(B) Perennial surface water bodies.

(I) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from a perennial surface water body.

(II) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from a perennial surface water body.

(C) Surface water supply.

(I) No dangerous waste management facility shall be located in a watershed identified in the report submitted to, and approved by, the department of health under the authority of WAC 248-54-225(J), Watershed control.

(II) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from the nearest surface water intake for domestic water.

(III) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from the nearest surface water intake for domestic water.

(ii) Ground water. To the extent feasible, proponents of land-based facilities should seek sites with natural site characteristics which are capable of providing protection of ground water resources. Natural features such as low permeability soils and substrata, relatively simple geologic formations, and high rates of evapotranspiration in relation to the seasonal occurrence of precipitation are preferable for the locations of land-based facilities. Proposed land-based facilities shall comply with the contingent ground water protection program, WAC 173-303-806 (4) (a) (xi) during the permitting process.

(1) Depth to ground water.

(I) Nonland-based facilities shall not be located in areas where there is less than ten feet vertical separation between the lowest point of the dangerous waste management unit and the seasonal high water level of the uppermost aquifer of beneficial use.

(II) Land-based facilities shall not be located in areas where there is less than fifty feet vertical separation between the lowest point of the dangerous waste management unit and the seasonal high water level of the uppermost aquifer of beneficial use.

(B) Sole source aquifer. No land-based facilities shall be located over an area designated as a sole source aquifer under section 1424(e) of the Federal Safe Drinking Water Act (P.L. 93-523).

(C) Ground water management areas. Owners/operators of facilities shall identify whether the proposed facility location is within a ground water management area, as proposed or certified pursuant to RCW 90.44.130. In order to maintain consistency with the purpose and substantive requirements of certified ground water management area plans, the department may require additional protective measures or reject inconsistent projects.

(D) Ground water intakes.

(I) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from the nearest ground water intake for domestic water.

(II) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from the nearest ground water intake for domestic water.

(d) Plants and animals: Intent. To reduce the potential for dangerous waste contaminating plant and animal habitat in the event of a release of dangerous wastes.

(i) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from the following areas:

(A) Wetlands;

(B) Designated critical habitat, for federally listed threatened or endangered species, as defined by the Endangered Species Act of 1973 (P.L. 93-205);

(C) Habitat designated by the Washington department of wildlife as habitat essential to the maintenance or recovery of any state listed threatened or endangered wildlife species;

(D) Natural areas which are acquired or voluntarily registered or dedicated by the owner under chapter 79.70 RCW, natural area preserves; and

(E) State or federally designated wildlife refuge, preserve, or bald eagle protection area.

(ii) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from those areas specified in item (i) above.

(7) Criteria for elements of the built environment. The following siting criteria establish locations from which facilities are excluded or which require separation from identified land uses. Unless otherwise stated, setback distances are measured horizontally from the dangerous waste management unit boundary to the identified land use.

These criteria shall be used as an initial screening tool in the selection of sites which may be considered by the department for the purpose of managing dangerous waste. A more comprehensive evaluation of locational factors will occur during the department's review of a permit application. The department may deny a permit or impose additional setback distances or other permit requirements if necessary to protect human health and the environment.

(a) Adjacent land use.

(i) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least two hundred feet from the nearest point of the facility property line.

(ii) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from the nearest point of the facility property line.

## (b) Special land uses.

(i) Wild and scenic rivers. Dangerous waste management facilities shall not be located within the viewshed of users on wild and scenic rivers designated by the state or federal government.

(ii) Nonland-based facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from the following:

(A) State or federally designated park, recreation area, or national monument;

(B) Wilderness area as defined by the Wilderness Act of 1964 (P.L. 88-577); and

(C) Land identified as prime farmland at the time a notice of intent is submitted to the department.

(iii) Land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from those land uses specified in item (ii) above.

## (c) Residences and public gathering places.

(i) Nonland-based facilities with the exception of incineration facilities shall be located such that the dangerous waste management unit boundary is at least five hundred feet from residences or public gathering places.

(ii) Incineration and land-based facilities shall be located such that the dangerous waste management unit boundary is at least one-quarter mile from residences or public gathering places.

(d) Land use compatibility. Owners/operators of nonpreempted facilities shall conform with local land use zoning designation requirements, as approved by the department under chapter 70.105 RCW.

(e) Archeological sites and historic sites. No dangerous waste management facility shall be located in an archeological site or historic site designated by the state or federal government.

NEW SECTION

WAC 173-303-355 SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT TITLE III COORDINATION. (1) Owners or operators shall coordinate preparedness and prevention planning and contingency planning efforts, conducted under WAC 173-303-340 and 173-303-350, with local emergency planning committees established pursuant to Title III of the 1986 Superfund Amendments and Reauthorization Act.

(2) Appropriate and generally accepted computer models should be utilized to determine the impacts of a potential catastrophic air release due to fire or explosion. Evacuation plans prepared pursuant to WAC 173-303-350 (3)(d) shall include those affected persons and areas identified through these modelling efforts.

AMENDATORY SECTION (Amending Order 98-24, filed 1/4/89)

WAC 173-303-806 FINAL FACILITY PERMITS. (1) Applicability. This section applies to all dangerous waste facilities required to have a final facility permit. The final facility permit requirements are applicable to:

(a) Final status TSD facilities;

(b) Special waste management facilities; and

(c) Certain recycling facilities that are not exempt from the permit requirements.

(2) Application. Any person subject to the permit requirements of this section who intends to operate a new TSD facility must comply with WAC 173-303-281 and apply for a final facility permit. The department may, at any time, require the owner or operator of an

existing TSD facility to apply for a final facility permit. Such owner or operator will be allowed one hundred eighty days to submit his application; the department may extend the length of the application period if it finds that there are good reasons to do so. The owner or operator of an existing TSD facility may voluntarily apply for a final facility permit at any time. Any person seeking a final facility permit shall complete, sign, and submit an application to the department. An application shall consist of a Part A permit form (which can be obtained from the department), and the contents of Part B as specified in subsection (4) of this section.

(3) Effective regulations. A final facility permit will include all applicable requirements of this chapter which are in effect on the date that the permit is issued by the department. WAC 173-303-840(7) provides a means for reopening permit proceedings at the discretion of the department where new requirements become effective during the permitting process and are of sufficient magnitude to make additional proceedings desirable. Any other changes to the final facility permit will be in accordance with the permit modification requirements of WAC 173-303-830.

(4) Contents of Part B. Part B of a permit application shall consist of the information required in (a) through (h) of this subsection.

(a) General requirements. Part B of the permit application consists of the general information requirements of this subsection, and the specific information requirements in (b) through (h) of this subsection as applicable to the facility. The Part B information requirements presented in (a) through (h) of this subsection, reflect the standards promulgated in WAC 173-303-600. These information requirements are necessary in order for the department to determine compliance with WAC 173-303-600 through 173-303-670. If owners and operators of TSD facilities can demonstrate that the information prescribed in Part B cannot be provided to the extent required, the department may make allowance for submission of such information on a case-by-case basis. Information required in Part B shall be submitted to the department and signed in accordance with requirements in WAC 173-303-810(12). Certain technical data, such as design drawings and specifications, and engineering studies shall be certified by a registered professional engineer. The following information is required for all TSD facilities, except as WAC 173-303-600(3) provides otherwise.

(i) A general description of the facility.

(ii) Chemical, biological, and physical analyses of the dangerous waste to be handled at the facility. At a minimum, these analyses shall contain all the information which must be known to treat, store, or dispose of the wastes properly in accordance with WAC 173-303-600.

(iii) A copy of the waste analysis plan required by WAC 173-303-300(5) and, if applicable WAC 173-303-300(5)(d).

(iv) A description of the security procedures and equipment required by WAC 173-303-310, or a justification demonstrating the reasons for requesting a waiver of this requirement.

(v) A copy of the general inspection schedule required by WAC 173-303-320(2). Include where applicable, as part of the inspection schedule, specific requirements in WAC 173-303-395(1)(d), 173-303-630(6), 173-303-640(4) and (6), 173-303-650(4), 173-303-655(4), 173-303-660(4) and (5), 173-303-665(4), and 173-303-670(7).

(vi) A justification of any request for a waiver(s) of the preparedness and prevention requirements of WAC 173-303-340, or a description of the procedures used to comply with these requirements.

(vii) A copy of the contingency plan required by WAC 173-303-350. Include, where applicable, as part of the contingency plan, specific requirements in WAC 173-303-640(8), 173-303-650(5) and 173-303-660(6).

(viii) A description of procedures, structures, or equipment used at the facility to:

(A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);

(B) Prevent run-off from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(C) Prevent contamination of water supplies;

(D) Mitigate effects of equipment failure and power outages; and

(E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing).

(ix) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395 (1)(c).

(x) Traffic pattern, estimated volume (number, types of vehicles) and control (for example, show turns across traffic lanes, and stacking lanes (if appropriate); describe access road surfacing and load bearing capacity; show traffic control signals).

(xi) (i) Facility location information;

(A) In order to determine the applicability of the earthquake fault criteria (WAC 173-303-420(3)) the owner or operator of a new facility must identify the county in which the facility is proposed to be located;

(B) Connects if the county is not listed in WAC 173-303-420(3)(c); no further information is required to demonstrate compliance with WAC 173-303-420(3);

(B) If the facility is proposed to be located in a county listed in WAC 173-303-420(3)(c), the owner or operator shall demonstrate compliance with the seismic standard. This demonstration may be made using either published geologic data or data obtained from field investigations carried out by the applicant. The information provided must be of such quality to be acceptable to geologists experienced in identifying and evaluating seismic activity. The information submitted must show that either:

(i) No faults which have had displacement in Holocene time are present, or no lineations which suggest the presence of a fault (which have displacement in Holocene time) within three thousand feet of a facility are present, based on data from published geologic studies; aerial reconnaissance of the area within a five-mile radius from the facility; an analysis of aerial photographs covering a three thousand foot radius of the facility; and if needed to clarify the above data, a reconnaissance based on walking portions of the area within three thousand feet of the facility; or

(ii) If faults (to include lineations) which have had displacement in Holocene time are present within three thousand feet of a facility, no faults pass within two hundred feet of the portions of the facility where treatment, storage, or disposal of dangerous waste will be conducted, based on data from a comprehensive geologic analysis of the site. Unless a site analysis is otherwise conclusive concerning the absence of faults within two hundred feet of such portions of the facility data shall be obtained from a subsurface exploration (trenching) of the area within a distance no less than two hundred feet from portions of the facility where treatment, storage, or disposal of dangerous waste will be conducted. Such trenching shall be performed in a direction that is perpendicular to known faults (which have had displacement in Holocene time) passing within three thousand feet of the portions of the facility where treatment, storage, or disposal of dangerous waste will be conducted. Such investigation shall document with supporting maps and other analyses, the location of faults found.

(C) Owners and operators of all facilities shall provide an identification of whether the facility is located within a one hundred year floodplain. This identification must indicate the source of data for such determination and include a copy of the relevant Federal Insurance Administration (FIA) flood map, if used, or the calculations and maps used where an FIA map is not available. Information shall also be provided identifying the one hundred year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a one hundred year flood.

(Consent:--Where maps--are--the--National--Flood--Insurance--Program produced by the Federal Insurance Administration (FIA) of the--Federal Emergency--Management--Agency--are--available;--they--will--normally--be determinative of whether a facility is located within--or--outside--of the--one--hundred--year--floodplain--However, if the FIA map excludes an area--(usually--areas--of the floodplain less than two--hundred--feet--in width);--these areas must be considered and a determination made as to whether they are in the one-hundred-year floodplain; where--FIA--maps are not available for a proposed facility location; the owner or operator--must--use--equivalent--mapping--techniques--to--determine--whether--the facility is within the one-hundred-year floodplain; and if so located, what the one-hundred-year flood elevation would be.)

(B) Owners and operators of facilities located in the one--hundred--year--floodplain must provide the following information:

(i) Engineering analysis to indicate the various hydrodynamic and hydrostatic--forces--expected--to--result--at the site as the consequence of a one-hundred-year flood;

(ii) Structural or other engineering studies showing--the--design of--operational--units--(e.g., tanks, incinerators) and flood protection devices--(e.g., floodwalls, dikes)--at the facility and how--these--will prevent--washout;

(iii) If applicable;--and--in--lieu--of--(i) (ii) (E) (i) and (ii) of this subsection, a detailed description of procedures to--be--followed to--remove--dangerous--waste--to--safety--before--the--facility--is--flooded; including--timing--of--such--movement--relative--to--flood--levels;--including--estimated--time--to--move--the--waste; to show that such movement can be completed before floodwaters reach the facility; a--description--of the--location(s)--to--which--the--waste--will--be--moved--and--demonstration that those facilities will be eligible to receive dangerous--waste--in accordance with the regulations under this chapter; the planned procedures;--equipment;--and--personnel--to--be--used--and--the--means--to--ensure that such resources will be available in time for use; and the--potential--for--accidental--discharges--of--the--waste--during--movement;

(E) Owners--and--operators--of--all--facilities--shall--provide--all information necessary to demonstrate--compliance--with--the--shoreline siting standards of VAC 173-303-420(5);

(F) The owner or operator of a new disposal facility must provide all--information--necessary--to--demonstrate--compliance--with--the--sole source aquifer siting standards of VAC 173-303-420(6);) Seismic risk consideration. The owner/operator of a proposed facility or expansion of an existing facility shall identify the seismic risk zone in which the facility is intended to be located. Where state or local maps are not available, United States Geological Survey Open File Report number 82-1033 may be used to identify seismic risk zones. The owner/operator shall demonstrate that the facility can and will be designed to resist seismic ground motion and that the design is sufficient to withstand the maximum horizontal acceleration of a design earthquake specified in the demonstration.

(xii) An outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the FSD facility in a safe manner as required to demonstrate compliance with VAC 173-303-330. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in VAC 173-303-330 (1) (d).

(xiii) A copy of the closure plan and, where applicable, the post-closure plan required by VAC 173-303-610 (3) and (8). Include, where applicable, as part of the plans, specific requirements in VAC 173-303-630(10), 173-303-640(5), 173-303-650(6), 173-303-655(8), 173-303-660(9), and 173-303-665(6).

(xiv) For dangerous waste disposal units that have been closed, documentation that notices required under VAC 173-303-610(10) have been filed.

(xv) The most recent closure cost estimate for the facility prepared in accordance with VAC 173-303-620(3) and a copy of the documentation required to demonstrate financial assurance under VAC 173-303-620(4). For a new facility, a copy of the required documentation may

be submitted sixty days prior to the initial receipt of dangerous wastes, if that is later than the submission of the Part 8.

(xvi) Where applicable, the most recent post-closure cost estimate for the facility prepared in accordance with WAC 173-303-620(5) plus a copy of the documentation required to demonstrate financial assurance under WAC 173-303-620(6). For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of dangerous wastes, if that is later than the submission of the Part 8.

(xvii) Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of WAC 173-303-620(8). For a new facility, documentation showing the amount of insurance meeting the specification of WAC 173-303-620 (8) (a) and, if applicable, WAC 173-303-620 (8) (b), that the owner or operator plans to have in effect before initial receipt of dangerous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in WAC 173-303-620 (8) (c).

(xviii) A topographic map showing a distance of one thousand feet around the facility at a scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet). Contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of 1.5 meters (5 feet), if relief is greater than 6.1 meters (20 feet), or an interval of 0.6 meters (2 feet), if relief is less than 6.1 meters (20 feet). Owners and operators of TSD facilities located in mountainous areas should use large contour intervals to adequately show topographic profiles of facilities. The map shall clearly show the following:

- (A) Map scale and date;
- (B) One hundred-year floodplain area;
- (C) Surface waters including intermittent streams;
- (D) Surrounding land uses (residential, commercial, agricultural, recreational);
- (E) A wind rose (i.e., prevailing windspeed and direction);
- (F) Orientation of the map (north arrow);
- (G) Legal boundaries of the TSD facility site;
- (H) Access control (fences, gates);
- (I) Injection and withdrawal wells both on-site and off-site;
- (J) Buildings; treatment, storage, or disposal operations; or other structure (recreation areas, run-off control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.);
- (K) Barriers for drainage or flood control; and
- (L) Location of operational units within the TSD facility site, where dangerous waste is (or will be) treated, stored, or disposed (include equipment clean-up areas).

(Note - For large TSD facilities the department will allow the use of other scales on a case-by-case basis.)

(xix) Applicants may be required to submit such information as may be necessary to enable the department to carry out its duties under other state or federal laws as required.

(xx) Additional information requirements. The following additional information regarding protection of ground water is required from owners or operators of dangerous waste surface impoundments, waste piles, land treatment units, and landfills except as otherwise provided in WAC 173-303-645 (1)(b):

(A) A summary of the ground water monitoring data obtained during the interim status period under 40 CFR 265.90 through 265.94, where applicable;

(B) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area);

(C) On the topographic map required under (a)(xviii) of this subsection, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under WAC 173-303-645(6), the proposed location of ground water monitoring wells as required under WAC 173-303-645(8), and, to the extent possible, the information required in (a)(ix)(B) of this subsection;

(D) A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted that:

(I) Delineates the extent of the plume on the topographic map required under (a)(xviii) of this subsection;

(II) Identifies the concentration of each constituent throughout the plume or identifies the maximum concentrations of each constituent in the plume. (Constituents are those listed in WAC 173-303-9905, and any other constituents not listed there which have caused a managed waste to be regulated under this chapter.);

(E) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of WAC 173-303-645(8);

(F) If the presence of dangerous constituents has not been detected in the ground water at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of WAC 173-303-645(9). This submission must address the following items specified under WAC 173-303-645(9):

(I) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of dangerous constituents in the ground water;

(II) A proposed ground water monitoring system;

(III) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and

(IV) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data;

(G) If the presence of dangerous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of WAC 173-303-645(10). The owner or operator must also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of WAC 173-303-645(11) except as provided in WAC 173-303-645(9)(h)(v). Alternatively, the owner or operator can obtain written authorization in advance from the department to submit a proposed permit schedule for development and submittal of such information. To demonstrate compliance with WAC 173-303-645(10), the owner or operator must address the following items:

(I) A description of the wastes previously handled at the facility;

(II) A characterization of the contaminated ground water, including concentrations of dangerous constituents and parameters;

(III) A list of constituents and parameters for which compliance monitoring will be undertaken in accordance with WAC 173-303-645(9) and (10);

(IV) Proposed concentration limits for each dangerous constituent and parameter, based on the criteria set forth in WAC 173-303-645(5)(a), including a justification for establishing any alternate concentration limits;

(V) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with the requirements of WAC 173-303-645(8); and

(VI) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground water monitoring data; and

(H) If dangerous constituents or parameters have been measured in the ground water which exceed the concentration limits established



under WAC 173-303-645(5), Table 1, or if ground water monitoring conducted at the time of permit application under 40 CFR 265.90 through 265.94 at the waste boundary indicates the presence of dangerous constituents from the facility in ground water over background concentrations, the owner or operator must submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of WAC 173-303-645(11). However, an owner or operator is not required to submit information to establish a corrective action program if he demonstrates to the department that alternate concentration limits will protect human health and the environment after consideration; the criteria listed in WAC 173-303-645(5). An owner or operator who is not required to establish a corrective action program for this reason must instead submit sufficient information to establish a compliance monitoring program which meets the requirements of WAC 173-303-645 (10) and (a)(ix)(F) of this subsection. To demonstrate compliance with WAC 173-303-645(11), the owner or operator must address, at a minimum, the following items:

(I) A characterization of the contaminated ground water, including concentrations of dangerous constituents and parameters;

(II) The concentration limit for each dangerous constituent and parameter found in the ground water as set forth in WAC 173-303-645(5);

(III) Detailed plans and an engineering report describing the corrective action to be taken;

(IV) A description of how the ground water monitoring program will demonstrate the adequacy of the corrective action; and

(V) The permit may contain a schedule for submittal of the information required in (a)(ix)(H)(III) and (IV) of this subsection, provided the owner or operator obtains written authorization from the department prior to submittal of the complete permit application.

(ixi) Contingent ground water protection program. The following actions are required for owners or operators of proposed land-based facilities, and may be required for owners/operators of existing land-based facilities, except as provided in WAC 173-303-645 (11)(b).

(A) Contingent ground water protection program. The owner or operator shall develop a contingent ground water protection program. The purpose of this program will be to prevent the migration of dangerous waste or dangerous waste constituents from waste management units to the nearest hydraulically downgradient receptor at any time during the life of the facility. For the purposes of this subsection, the downgradient receptor shall be the facility property line, perennial surface water or domestic well, whichever is nearest to the dangerous waste management unit. The contingent ground water protection program shall at a minimum:

(i) Define the local and regional hydrogeologic characteristics. The contingent ground water protection program shall be based on a sufficient understanding of site geology, hydrology, and other factors to allow evaluation of its adequacy by the department. Site characterization shall be performed in sufficient detail to provide, at a minimum, the following information: Site geostratigraphy; site hydrostratigraphy; identification of aquifers, aquitards, and aquicludes; flow models for each stratum (i.e., porous media or fracture flow); the distribution of vertical and horizontal hydraulic conductivity; effective porosity; horizontal and vertical hydraulic gradients; ground water travel time to receptors; and heterogeneity for each stratigraphic unit. Site interpretative models shall include ranges of tested values. The provisions of WAC 173-303-806 (4)(a)(ix) and 173-303-645, shall be used as guidance in the development of the contingent ground water protection program.

(ii) Identify the range of potential release scenarios that could occur during facility operation and the postclosure care period. The scenarios shall incorporate the intended design(s) of the dangerous waste management unit(s), wastes to be placed in the dangerous waste management unit(s), waste and leachate chemistry, waste, and soil and rock geochemical interactions, and the results of site characterization pursuant to WAC 173-303-806 (4)(a)(ix) and (ixi);

(III) Include specific physical action to be taken if dangerous waste or dangerous waste constituents are detected in one or more of the monitoring wells. The physical actions shall be based upon engineering feasibility studies describing remedial actions established from site specific conditions and waste features. Such actions may include installation of a pump and treat system between the monitoring well and the receptor or installation of a section of slurry wall to decrease ground water travel times. The description of the systems shall also provide how the remediation system will achieve cleanup, its efficiency, and the timeframes involved;

(IV) Incorporate the design, construction, and sampling methods outlined in VAC 173-303-645 (8) (c), (d), (e), (f), and (g); and

(V) Include reporting procedures to the department;

(8) The ground water protection program shall be activated if the presence of dangerous waste or dangerous waste constituents have been detected at the point of compliance in accordance with VAC 173-303-645 (9) (g), and shall continue until the concentration of dangerous waste or dangerous waste constituents under VAC 173-303-645 (4) are reduced to levels below their respective concentration limits specified in VAC 173-303-645 (5).

(C) If the owner/operator does not demonstrate that the ground water protection program will prevent the migration of dangerous waste or its constituents to the nearest receptor, the department will require corrections to be made in the protection program, increase setbacks from the nearest receptor, or deny the permit.

(ixii) Additional requirements for incineration facilities. The following actions regarding the protection of human health and the environment must be taken by owners/operators of proposed hazardous waste incineration facilities which are subject to VAC 173-303-292 (7) (c), and may be required for owners/operators of any other incineration facility. The following actions are required for owners or operators of proposed incineration facilities and may be required for owners or operators of existing incineration facilities.

(A) Ambient monitoring program. The owner/operator shall be required to develop an ambient monitoring program. The purpose of this ambient monitoring program will be to: Gather baseline environmental information characterizing on-site and off-site environmental conditions prior to facility operation; and, to identify and measure changes in the environment which may be linked to the construction and operation of the facility. The ambient monitoring program shall, at a minimum:

(I) Include a characterization of facility emission sources and pathways of contaminant transport.

(II) Characterize local and regional ecosystems, including agricultural, and their sensitivity to the potential contaminants from the facility.

(III) Incorporate the findings of the environmental impact statement's health risk assessment and/or other assessments specific to the proposal or available to the scientific community regarding emissions from dangerous waste management facilities and their potential human health and environmental effects.

(IV) Identify sensitive indicator plants and animals for biomonitoring. Identify specific chemical constituents of concern, sampling locations, sampling frequency, sampling and analytical methods, chain of custody procedures, quality assurance/quality control procedures, reporting times, recordkeeping procedures, and data evaluation procedures.

(B) Environmental review procedures. The owner/operator shall establish procedures to allow for public review of facility operation and all monitoring data required by the facility's permit. In developing this process, the owner/operator shall, at a minimum:

(I) Coordinate this effort with the public and interested local organizations;

(II) Identify the informational needs of the community and develop a public information process which meets these needs; and

(III) Develop procedures allowing full access by the public to all monitoring data required by the permit.

(C) Impact mitigation. Prior to the department issuing a permit, the owner/operator shall submit an impact mitigation plan which demonstrates to the satisfaction of the department that they have developed and are financially and otherwise prepared to implement a program which will mitigate all probable significant impacts due to facility location and operations.

(b) Specific Part B information requirements for containers. Except as otherwise provided in WAC 173-303-600(3), owners or operators of facilities that store containers of dangerous waste must provide the following additional information:

(i) A description of the containment system to demonstrate compliance with WAC 173-303-630(7). Show at least the following:

(A) Basic design parameters, dimensions, and materials of construction including allowance for a twenty-five-year, twenty-four-hour storm;

(B) How the design promotes positive drainage control or how containers are kept from contact with standing liquids in the containment system;

(C) Capacity of the containment system relative to the volume of the largest container to be stored;

(D) Provisions for preventing or managing run-on;

(E) How accumulated liquids can be analyzed and removed to prevent overflow; and

(F) A description of the building or other protective covering for EHW containers;

(ii) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with WAC 173-303-630 (7) (c), including:

(A) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

(B) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids;

(iii) A description of the procedures for labeling containers;

(iv) Sketches, drawings, or data demonstrating compliance with WAC 173-303-630(8) (location of buffer zone and containers holding ignitable or reactive wastes) and WAC 173-303-630 (9) (c) (location of incompatible wastes), where applicable; and

(v) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with WAC 173-303-630 (9) (a) and (b), and 173-303-395 (1) (b) and (c).

(c) Specific Part B information requirements for tanks. Except as otherwise provided in WAC 173-303-600(3), owners and operators of facilities that use tanks to store or treat dangerous waste must provide the following information:

(i) A written assessment that is reviewed and certified by an independent, qualified, registered professional engineer as to the structural integrity and suitability for handling dangerous waste of each tank system, as required under WAC 173-303-640 (2) and (3);

(ii) Dimensions and capacity of each tank;

(iii) Description of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents);

(iv) A diagram of piping, instrumentation, and process flow for each tank system;

(v) A description of materials and equipment used to provide external corrosion protection, as required under WAC 173-303-640 (3) (a) (iii) (8);

(vi) For new tank systems, a detailed description of how the tank system(s) will be installed in compliance with WAC 173-303-640 (3) (b), (c), (d), and (e);

(vii) Detailed plans and a description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of WAC 173-303-640 (4) (a), (b), (c), (d), (e), and (f);

(viii) For tank systems for which a variance from the requirements of WAC 173-303-640(4) is sought (as provided by WAC 173-303-640 (4) (g)):

(A) Detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any dangerous waste or dangerous constituents into the ground water or surface water during the life of the facility; or

(B) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment.

(ix) Description of controls and practices to prevent spills and overflows, as required under WAC 173-303-640 (5) (b);

(x) For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of WAC 173-303-640 (9) and (10);

(xi) A description of the marking and/or labeling of tanks; and

(xii) Tank design to prevent escape of vapors and emissions of acutely or chronically toxic (upon inhalation) EHW.

(d) Specific Part B information requirements for surface impoundments. Except as otherwise provided in WAC 173-303-600(3), owners and operators of facilities that store, treat, or dispose of dangerous waste in surface impoundments must provide the following additional information:

(i) A list of the dangerous wastes placed or to be placed in each surface impoundment;

(ii) Detailed plans and an engineering report describing how the surface impoundment is or will be designed, constructed, operated and maintained to meet the requirements of WAC 173-303-650(2). This submission must address the following items as specified in WAC 173-303-650(2):

(A) The liner system (except for an existing portion of a surface impoundment), including the certification required by WAC 173-303-650 (2) (a) (i) (D) for EHW management. If an exemption from the requirement for a liner is sought as provided by WAC 173-303-650 (2) (b), submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any dangerous constituents into the ground water or surface water at any future time;

(B) Prevention of overtopping; and

(C) Structural integrity of dikes:

(iii) If any exemption from WAC 173-303-645 is sought, as provided by WAC 173-303-650(3), detailed plans and an engineering report explaining the location of the saturated zone in relation to the surface impoundment, and the design of a double-liner system that incorporates a leak detection system between the liners;

(iv) A description of how each surface impoundment, including the liner and cover systems and appurtenances for control of overtopping, will be inspected in order to meet the requirements of WAC 173-303-650 (4) (a) and (b). This information should be included in the inspection plan submitted under (a) (v) of this subsection;

(v) A certification by a qualified engineer which attests to the structural integrity of each dike, as required under WAC 173-303-650 (4) (c). For new units, the owner or operator must submit a statement by a qualified engineer that he will provide such a certification upon completion of construction in accordance with the plans and specifications;

(vi) A description of the procedure to be used for removing a surface impoundment from service, as required under WAC 173-303-650 (5) (b) and (c). This information should be included in the contingency plan submitted under (a) (vii) of this subsection;

(vii) A description of how dangerous waste residues and contaminated materials will be removed from the unit at closure, as required under WAC 173-303-650 (6) (a) (i). For any wastes not to be removed from the unit upon closure, the owner or operator must submit detailed plans and an engineering report describing how WAC 173-303-650 (6) (a) (ii) and (b) will be complied with. This information should be

included in the closure plan and, where applicable, the post-closure plan submitted under (a) (xiii) of this subsection:

(viii) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how WAC 173-303-650(7) will be complied with;

(ix) If incompatible wastes, or incompatible wastes and materials will be placed in a surface impoundment, an explanation of how WAC 173-303-650(8) will be complied with; and

(x) Where applicable, a waste management plan for Dangerous Waste Nos. P020, P021, P022, P023, P026, or P027 describing how the surface impoundment is or will be designed to meet the requirements of WAC 173-303-650(9).

(e) Specific Part B information requirements for waste piles. Except as otherwise provided in WAC 173-303-600(3), owners and operators of facilities that store or treat dangerous waste in waste piles must provide the following additional information:

(i) A list of dangerous wastes placed or to be placed in each waste pile;

(ii) If an exemption is sought to WAC 173-303-650(2), and 173-303-645 as provided by WAC 173-303-660 (1) (c), an explanation of how the standards of WAC 173-303-660 (1) (c) will be complied with;

(iii) Detailed plans and an engineering report describing how the pile is or will be designed, constructed, operated, and maintained to meet the requirements of WAC 173-303-660(2). This submission must address the following items as specified in WAC 173-303-660(2):

(A) The liner system (except for an existing portion of a pile), including the licensed engineer's certification when required by WAC 173-303-660 (2) (c). If an exemption from the requirement for a liner is sought, as provided by WAC 173-303-660 (2) (d), the owner or operator must submit detailed plans and engineering and hydrogeologic reports, as applicable, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(B) Control of run-on;

(C) Control of run-off;

(D) Management of collection and holding units associated with run-on and run-off control systems; and

(E) Control of wind dispersal of particulate matter, where applicable;

(iv) If an exemption from WAC 173-303-645 is sought as provided by WAC 173-303-660 (3) or (4), submit detailed plans and an engineering report describing how the requirements of WAC 173-303-660 (3) (a) or (4) (a) will be complied with;

(v) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of WAC 173-303-660(5). This information should be included in the inspection plan submitted under (a) (v) of this subsection. If an exemption is sought to WAC 173-303-645 pursuant to WAC 173-303-660(4), describe in the inspection plan how the inspection requirements of WAC 173-303-660 (4) (a) (iii) will be complied with;

(vi) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

(vii) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of WAC 173-303-660(7) will be complied with;

(viii) If incompatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how WAC 173-303-660(8) will be complied with;

(ix) A description of how dangerous waste, waste residues and contaminated materials will be removed from the waste pile at closure, as required under WAC 173-303-660 (9) (a). For any waste not to be removed from the waste pile upon closure, the owner or operator must submit detailed plans and an engineering report describing how WAC 173-303-665 (6) (a) and (b) will be complied with. This information

should be included in the closure plan and, where applicable, the post-closure plan submitted under (a)(xiii) of this subsection:

(x) Where applicable, a waste management plan for Dangerous Waste Nos. P020, P021, P022, P023, P026, or P027 describing how a waste pile that is not enclosed (as defined in WAC 173-303-660 (1)(c)) is or will be designed, constructed, operated, and maintained to meet the requirements of WAC 173-303-660(10).

(f) Specific Part 8 information requirements for incinerators. Except as WAC 173-303-670(1) provides otherwise, owners and operators of facilities that incinerate dangerous waste must fulfill the informational requirements of (f) of this subsection.

(i) When seeking an exemption under WAC 173-303-670 (1)(b) (ignitable or reactive wastes only):

(A) Documentation that the waste is listed as a dangerous waste in WAC 173-303-080, solely because it is ignitable; or

(B) Documentation that the waste is listed as a dangerous waste in WAC 173-303-080, solely because it is reactive for characteristics other than those listed in WAC 173-303-090 (7)(a)(iv) and (v), and will not be burned when other dangerous wastes are present in the combustion zone; or

(C) Documentation that the waste is a dangerous waste solely because it possesses the characteristic of ignitability, as determined by the tests for characteristics of dangerous waste under WAC 173-303-090; or

(D) Documentation that the waste is a dangerous waste solely because it possesses the reactivity characteristics listed in WAC 173-303-090 (7)(a)(i), (ii), (iii), (vi), (vii), and (viii), and that it will not be burned when other dangerous wastes are present in the combustion zone.

(ii) Submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with WAC 173-303-807.

(iii) In lieu of a trial burn, the applicant may submit the following information;

(A) An analysis of each waste or mixture of wastes to be burned including:

(I) Heating value of the waste in the form and composition in which it will be burned;

(II) Viscosity (if applicable), or description of physical form of the waste, and specific gravity of the waste;

(III) An identification of any dangerous organic constituents listed in WAC 173-303-9905 or, if not listed, which cause the waste(s) to be regulated, which are present in the waste to be burned, except that the applicant need not analyze for constituents which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in WAC 173-303-110(3), or their equivalent;

(IV) An approximate quantification of the dangerous constituents identified in the waste, within the precision produced by the analytical methods specified in WAC 173-303-110(3); and

(V) A quantification of those dangerous constituents in the waste which may be designated as principal organic dangerous constituents (PODC's) based on data submitted from other trial or operational burns which demonstrate compliance with the performance standards in WAC 173-303-670(4);

(B) A detailed engineering description of the incinerator, including:

(I) Manufacturer's name and model number of incinerator;

(II) Type of incinerator;

(III) Linear dimension of incinerator unit including cross sectional area of combustion chamber;

(IV) Description of auxiliary fuel system (type/feed);

(V) Capacity of prime mover;

(VI) Description of automatic waste feed cutoff system(s);

(VII) Stack gas monitoring and pollution control monitoring system;

- (VIII) Nozzle and burner design;
- (IX) Construction materials; and
- (X) Location and description of temperature, pressure, and flow indicating devices and control devices;
- (C) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in (f)(iii)(A) of this subsection. This analysis should specify the principal organic dangerous constituents (PODC's) which the applicant has identified in the waste for which a permit is sought, and any differences from the PODC's in the waste for which burn data are provided;
- (D) The design and operating conditions of the incinerator unit to be used, compared with that for which comparative burn data are available;
- (E) A description of the results submitted from any previously conducted trial burn(s) including:
  - (I) Sampling and analysis techniques used to calculate performance standards in WAC 173-303-670(4); and
  - (II) Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement);
  - (F) The expected incinerator operation information to demonstrate compliance with WAC 173-303-670 (4) and (6), including:
    - (I) Expected carbon monoxide (CO) level in the stack exhaust gas;
    - (II) Waste feed rate;
    - (III) Combustion zone temperature;
    - (IV) Indication of combustion gas velocity;
    - (V) Expected stack gas volume, flow rate, and temperature;
    - (VI) Computed residence time for waste in the combustion zone;
    - (VII) Expected hydrochloric acid removal efficiency;
    - (VIII) Expected fugitive emissions and their control procedures;
- and
- (IX) Proposed waste feed cutoff limits based on the identified significant operating parameters;
- (G) Such supplemental information as the department finds necessary to achieve the purposes of this subsection;
- (H) Waste analysis data, including that submitted in (f)(iii)(A) of this subsection, sufficient to allow the department to specify as permit principal organic dangerous constituents (permit PODC's) those constituents for which destruction and removal efficiencies will be required; and
- (I) Test protocols and sampling and analytical data to demonstrate the designation status under WAC 173-303-070 of:
  - (I) Incinerator ash residues, if any; and
  - (II) Residues from the air pollution control devices.
- (iv) The department shall approve a permit application without a trial burn if the department finds that:
  - (A) The wastes are sufficiently similar; and
  - (B) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under WAC 173-303-670(6)) operating conditions that will ensure that the performance standards in WAC 173-303-670(4) will be met by the incinerator.
- (g) Specific Part B information requirements for land treatment facilities. Except as otherwise provided in WAC 173-303-600(3), owners and operators of facilities that use land treatment to dispose of dangerous waste must provide the following additional information:
  - (i) A description of plans to conduct a treatment demonstration as required under WAC 173-303-655(3). The description must include the following information:
    - (A) The wastes for which the demonstration will be made and the potential dangerous constituents in the waste;
    - (B) The data sources to be used to make the demonstration (e.g., literature, laboratory data, field data, or operating data);
    - (C) Any specific laboratory or field test that will be conducted, including:

(I) The type of test (e.g., column leaching, degradation);  
 (II) Materials and methods, including analytical procedures;  
 (III) Expected time for completion; and  
 (IV) Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices;

(ii) A description of a land treatment program, as required under WAC 173-303-655(2). This information must be submitted with the plans for the treatment demonstration, and updated following the treatment demonstration. The land treatment program must address the following items:

(A) The wastes to be land treated;  
 (B) Design measures and operating practices necessary to maximize treatment in accordance with WAC 173-303-655 (4) (a) including:

(I) Waste application method and rate;  
 (II) Measures to control soil pH;  
 (III) Enhancement of microbial or chemical reactions; and  
 (IV) Control of moisture content;

(C) Provisions for unsaturated zone monitoring, including:

(I) Sampling equipment, procedures, and frequency;  
 (II) Procedures for selecting sampling locations;  
 (III) Analytical procedures;  
 (IV) Chain of custody control;

(V) Procedures for establishing background values;

(VI) Statistical methods for interpreting results; and

(VII) The justification for any dangerous constituents recommended for selection as principal dangerous constituents, in accordance with the criteria for such selection in WAC 173-303-655 (6) (a);

(D) A list of dangerous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to WAC 173-303-300;

(E) The proposed dimensions of the treatment zone;

(iii) A description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of WAC 173-303-655(4). This submission must address the following items:

(A) Control of run-on;

(B) Collection and control of run-off;

(C) Minimization of run-off of dangerous constituents from the treatment zone;

(D) Management of collection and holding facilities associated with run-on and run-off control systems;

(E) Periodic inspection of the unit. This information should be included in the inspection plan submitted under (a) (v) of this subsection; and

(F) Control of wind dispersal of particulate matter, if applicable;

(iv) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under WAC 173-303-655(5) will be conducted including:

(A) Characteristics of the food-chain crop for which the demonstration will be made;

(B) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;

(C) Procedures for crop growth, sample collection, sample analysis, and data evaluation;

(D) Characteristics of the comparison crop including the location and conditions under which it was or will be grown; and

(E) If cadmium is present in the land treated waste, a description of how the requirements of WAC 173-303-655 (5) (b) will be complied with;

(v) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required under WAC 173-303-655 (8) (a) (viii) and (c) (ii). This information should be included in the closure plan and, where applicable, the post-closure care plan submitted under (a) (xiii) of this subsection;



(vi) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of WAC 173-303-655(9) will be complied with; and

(vii) If incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, an explanation of how WAC 173-303-655(10) will be complied with.

(viii) Where applicable, a waste management plan for Dangerous Waste nos. P020, P021, P022, P023, P026, or P027 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of WAC 173-303-655(12).

(b) Specific Part B information requirements for landfills. Except as otherwise provided in WAC 173-303-600(3), owners and operators of facilities that dispose of dangerous waste in landfills must provide the following additional information:

(i) A list of the dangerous wastes placed or to be placed in each landfill or landfill cell;

(ii) Detailed plans and an engineering report describing how the landfill is or will be designed, constructed, operated and maintained to comply with the requirements of WAC 173-303-665(2). This submission must address the following items as specified in WAC 173-303-665(2):

(A) The liner system and leachate collection and removal system (except for an existing portion of a landfill), including the licensed engineer's certification required by WAC 173-303-665 (2) (a) (i). If an exemption from the requirements for a liner and a leachate collection and removal system is sought, as provided by WAC 173-303-665 (2) (b), submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any dangerous constituent into the ground water or surface water at any future time;

(B) Control of run-on;

(C) Control of run-off;

(D) Management of collection and holding facilities associated with run-on and run-off control systems; and

(E) Control of wind dispersal of particulate matter, where applicable;

(iii) If an exemption from WAC 173-303-645 is sought, as provided by WAC 173-303-665(3), the owner or operator must submit detailed plans and an engineering report explaining the location of the saturated zone in relation to the landfill, the design of a double-liner system that incorporates a leak detection system between the liners, and a leachate collection and removal system above the liners;

(iv) A description of how each landfill, including the liner and cover systems, will be inspected in order to meet the requirements of WAC 173-303-665(4). This information should be included in the inspection plan submitted under (a) (v) of this subsection;

(v) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with WAC 173-303-665 (6) (a), and a description of how each landfill will be maintained and monitored after closure in accordance with WAC 173-303-665 (6) (b) and (c). This information should be included in the closure and post-closure plans submitted under (a) (xiii) of this subsection;

(vi) If ignitable or reactive wastes will be landfilled, an explanation of how the standards of WAC 173-303-665(7) will be complied with;

(vii) If incompatible wastes, or incompatible wastes and materials will be landfilled, an explanation of how WAC 173-303-665(8) will be complied with;

(viii) If bulk of noncontainerized liquid waste or wastes containing free liquids is to be landfilled, an explanation of how the requirements of WAC 173-303-665(9) will be complied with;

(ix) If containers of dangerous waste are to be landfilled, an explanation of how the requirements of WAC 173-303-665(10) will be complied with; and

(x) where applicable, a waste management plan for Dangerous Waste Nos. R020, R021, R022, R023, R026, or R027 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of WAC 173-303-665(11).

(5) Construction. A person may begin physical construction of a new facility, or of new portions of an existing facility if the new portions would amount to reconstruction under interim status (WAC 173-303-805(7)), only after complying with WAC 173-303-281, submitting Part A and Part B of the permit application and receiving a final facility permit. All permit applications must be submitted at least one hundred eighty days before physical construction is expected to begin.

(6) Reapplications. Any dangerous waste facility with an effective final facility permit shall submit a new application one hundred eighty days prior to the expiration date of the effective permit, unless the department grants a later date provided that such date will never be later than the expiration date of the effective permit.

(7) Continuation of expiring permits.

(a) When the owner/operator submits a timely application for a final facility permit and the application is determined by the department to be complete pursuant to subsection (8) of this section, the facility is allowed to continue operating under the expiring or expired permit until the effective date of the new permit.

(b) When the facility is not in compliance with the conditions of the expiring or expired permit, the department may choose to do any of the following:

(i) Initiate enforcement action based upon the permit which has been continued;

(ii) Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(iii) Issue a new permit with appropriate conditions; and/or

(iv) take other actions authorized by this chapter.

(8) Completeness. The department shall not issue a final facility permit before receiving a complete application, except for permits by rule or emergency permits. An application for a permit is complete when the application form and any supplemental information has been submitted to the department's satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity.

(9) Recordkeeping. Applicants shall keep records of all data used to complete the permit applications, and any supplemental information submitted to the department for a period of at least three years from the date the application is signed.

(10) General permit conditions. All final facility permits shall contain general permit conditions described in WAC 173-303-810.

(11) Permit duration.

(a) Final facility permits shall be effective for a fixed term not to exceed ten years.

(b) The department may issue any final facility permit for a duration that is less than the full allowable term.

(c) The term of a final facility permit shall not be extended beyond ten years, unless otherwise authorized under subsection (7) or this section.

(12) Grounds for termination. The following are causes for terminating a final facility permit during its term, or for denying a permit application:

(a) Noncompliance by the permittee with any condition of the permit;

(b) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

(c) A determination that the permitted activity endangers public health or the environment and the hazard can only be controlled by permit modification or termination; or

(d) A determination that the permit applicant has failed to satisfy the performance standards of WAC 173-303-283.

(13) Permit changes. All final facility permits shall be subject to the requirements of permit changes, WAC 173-303-830.

(14) Procedures for decision making. Issuance of final facility permits will be subject to the procedures for decision making described in WAC 173-303-840.

(15) Other requirements for final special waste and recycling facility permits. In lieu of issuing a final special waste or recycling facility permit, the department may, after providing opportunity for public comment in accordance with WAC 173-303-840, defer to a permit already issued under other statutory authority administered by the department (such as the State Water Pollution Control Act, chapter 90.48 RCW, the State Clean Air Act, chapter 70.94 RCW, etc.) which incorporates the requirements of this section, and WAC 173-303-500 through 173-303-525 for recycling facilities or WAC 173-303-550 through 173-303-560 for special waste facilities.

#### REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 173-303-420 SITING STANDARDS.

**ATTACHMENT C**

**STATE OF ALASKA**

# STATE OF ALASKA

## DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF ENVIRONMENTAL QUALITY  
P.O. BOX O, JUNEAU, AK 99811-1800

WALTER J. HICKEL, GOVERNOR

Telephone:  
(907) 465-2671

January 23, 1991

Mr. Ron Ross  
Program Manager  
Western Governors' Association  
600 17th Street, Suite 1705, South Tower  
Denver CO 80202-5442

Dear <sup>Ron</sup>~~Mr. Ross~~:

In addition to the information in Alaska's Worksheet for Monitoring Capacity Assurance Efforts, sent to you on December 4, 1990, we are providing the following brief description of Alaska's hazardous waste minimization activities for inclusion in WGA's upcoming capacity assurance monitoring report to EPA.

The Alaska Department of Environmental Conservation has:

- Began a program to train Department hazardous waste compliance inspectors in waste minimization techniques;
- Provided pass-through grant funding to the Alaska Health Project, an independent non-profit organization, to provide a variety of hazardous waste reduction services to Alaskans, including conducting waste reduction audits, responding to technical assistance inquiries, developing a university-level waste reduction course curricula, producing a quarterly waste reduction newsletter, giving outreach seminars on waste reduction, and developing a community waste reduction program;
- Provided seed funds to the University of Alaska's School of Health Sciences to develop and deliver a pollution prevention course in the Spring Semester of 1991;
- Sponsored six waste management and reduction workshops for photofinishers, printers, and vehicle maintenance shops, in conjunction with the states of Washington, Oregon, and Idaho;
- Participated in a joint pollution prevention project with EPA at an Alaskan U.S. Coast Guard facility;
- Began development of a pollution prevention technical assistance resource library for use by the Department and the public.

- Developed a waste minimization checklist for use during compliance inspections of facilities that generate hazardous wastes;
- Developed waste reduction planning provisions for proposed TSD permits, where facilities also are waste generators;
- Developed and distributed a supplemental waste minimization questionnaire with Alaska's 1990 Annual Hazardous Waste Report for all hazardous waste generators;
- Developed waste minimization provisions for inclusion in hazardous waste administrative enforcement orders;
- Providing technical assistance to hazardous waste generators through written materials and telephone or on-site inquiries;
- Reviewing 1990 hazardous waste shipment manifests to assess the viability of targeting specific waste generating facilities or waste types for special waste reduction efforts;
- Began development of a contract to develop and implement an Alaska local government pollution prevention technology transfer roundtable that will provide a forum for local governments representatives to learn about waste reduction options and to share information about their waste reduction activities;
- Began development of a contract to establish and deliver a toll-free, statewide telephone service that provides pollution prevention technical assistance information and to support the preparation, publication, and distribution of pollution prevention newsletter; and
- Actively participated in the Pacific Northwest Pollution Prevention Roundtable, the Western States Recycling Coalition, the National Roundtable for State Waste Reduction Programs.

Please contact me if you have any questions or need additional information about any of these items.

Sincerely,

A handwritten signature in black ink, appearing to read 'JLM', with a large, stylized loop at the beginning.

Jeffery L. Mach  
Chief, Solid and Hazardous  
Waste Management Section

**ATTACHMENT D**

**STATE OF COLORADO**

# STATE OF COLORADO

## COLORADO DEPARTMENT OF HEALTH

4210 East 11th Avenue  
Denver, Colorado 80220-3716  
Phone (303) 320-8333

Tel/fax:  
(303) 322-9076 (Main Building/Denver)  
(303) 320-1529 (Plumigan Place/Denver)  
(303) 248-7198 (Grand Junction Regional Office)



Roy Romer  
Governor

Thomas M. Vernon  
Executive Director

February 4, 1991

Mr. James Scherer  
Regional Administrator  
U.S. Environmental Protection Agency  
Region VIII  
One Denver Place  
999 18th Street, Suite 500  
Denver, Colorado 80202-2405

Dear Mr. <sup>Jim</sup>Scherer:

As a follow-up to our letter to you regarding the supplemental conditions to Colorado's Capacity Assurance Plan, dated June 8, 1990, we are submitting the attached Waste Minimization Strategy. The other elements of the Supplemental Conditions are being handled by the WCA.

If you have any questions or comments regarding this strategy, please do not hesitate to contact me.

Sincerely,

David C. Shelton  
Director  
Hazardous Materials and  
Waste Management Division

DCS:nr

cc: Governor Roy Romer  
c/o Tim Holeman  
Bob Duprey  
Joel Kohn  
Tom Looby  
Ron Ross



## WASTE MINIMIZATION STRATEGY

### Introduction

As a supplemental condition to Colorado's Capacity Assurance Plan, the State was required to develop a hazardous waste minimization strategy, which would include efforts to encourage waste minimization through permits, compliance inspections, and enforcement actions.

### Strategy Outline

#### A. Permits

All TSD facilities which are generators of hazardous waste and which are not presently permitted will be required, through a condition of their permit (when issued or reissued), to submit a description of the facility's waste minimization program which complies with the requirements of 6 CCR 1007-3, Section 264.73(b)(9). This submittal would be reviewed for compliance with this section of the regulations rather than being reviewed for approval as part of the permit. This would save time and effort for the permit writer and achieve the same results. If the submittal is weak, the permit writer may be able to use the submittal's inadequacy to provide some leverage for the facility to request an audit or other technical assistance from the Colorado Waste Reduction program. In extreme cases, enforcement action may be necessary to bring the facility into compliance. State permit writers will attend the Waste Minimization Training Course for Permit Writers, being developed by EPA.

#### B. Compliance Inspection

The Waste Reduction Program is developing a short description of its services and assistance available to hazardous waste generators. State hazardous waste inspectors will provide copies of this description of services to generators at the time of inspection. The inspectors will also inquire about the "program in place to minimize waste to the extent practicable" for each generator inspected. In addition, waste reduction fact sheets for certain types of small quantity generators, such as dry cleaners and vehicle repair shops, will be given out by the inspectors, as appropriate.

#### C. Enforcement Actions

Any settlement which results from enforcement actions taken against hazardous waste generators will include a component for waste minimization, if appropriate. The State intends to follow guidance from EPA in this area, as such guidance becomes available.

D. Waste Reduction Program

The workplan for the Colorado Waste Reduction Program is attached. This program is being funded by EPA through the Pollution Prevention Grants program.

## Colorado Waste Reduction Program

### 1. Program Elements

#### 1.1. Seminars.

Assist CACI in providing seminars for solvent waste reduction and waste reduction in metal finishing operations. Sponsor one seminar at CSU during the first year in principles of conducting audits, and possibly one-two additional seminars at CSU during the second year, focusing on other industry types such as electronic component manufacturing.

#### 1.2 Information center.

In response to phone or walk-in requests, provide short written reports on waste reduction options for particular industries, based on references and accumulated case studies from throughout the country. The larger generators could also be approached directly and assisted with this type of information.

1.3 On-site technical assistance (for small or medium-size companies). Companies would be targeted based on size of company, volume of waste generated, and type of industrial activity. In addition other requests for assistance would be prioritized based on these same factors.

1.3.1. Perform short "quick and dirty" audits, consisting of one-day site visits to identify waste streams and follow-up reports listing waste-reducing options.

1.3.2. Perform feasibility studies based on short site-visits to investigate particular waste-reducing options.

1.3.3. Assist companies in starting their own waste reduction program. This would consist of a quick walk-through of the facility and meeting with the key people to discuss how to create a successful program.

#### 1.4. Governor's award.

Give recognition to two or three outstanding examples each year of successful waste reduction efforts. CACI and CSU would be invited to participate with CDH in the process of choosing the award recipients. Criteria would be established with which to judge the applicants.

#### 1.5. Monitoring of program effectiveness.

1.5.1 Gather information on implementation of waste-reducing options and cost savings from companies receiving technical assistance and/or attending seminars

1.5.2. Monitor RCRA and SARA 313 annual report data on generation of hazardous waste and releases of hazardous chemicals

## Page Two

## Colorado Waste Reduction Program

## 1.6 Training of regulatory personnel.

Assist the OHEP coordinator in providing waste reduction training to hazardous waste, water quality, and air quality permit writers and inspectors.

1.7. Assistance to Pollution Prevention Partnership. Provide limited and focused assistance to the Pollution Prevention Partnership upon request from the OHEP coordinator.

2. Implementation

## 2.1. Staff.

The staff would consist of one full-time engineer, part-time assistance from another engineer and part-time secretarial support, all employed by CDH and under the supervision of Dave Shelton (Director of the Hazardous Materials and Waste Management Division). One of the two engineers would be the program manager.

## 2.2. Location

The facility from which the program would operate would be located at the main CDH building, but on a separate floor from the hazardous waste regulatory programs. A separate area from other offices of Hazardous Materials and Waste Management Division would be designated as the Waste Minimization Program or Industrial Pollution Prevention Program.

## 2.3. Training.

The two engineers will require training in how to provide on-site technical assistance. The first part of the training will be a one-day seminar at CSU in principles of conducting audits for waste reduction. The engineers will then accompany CSU's technical assistance team on 2 audits during the first year of the program, and possibly one additional audit during the 2nd year.

The second part of the training will be provided by Terry Foecke, the National coordinator for waste reduction training, together with the State of Minnesota. The engineers will travel to Minnesota for 2-3 days in February of 1991, during which time they will receive instruction from Mr. Foecke as well as field experience with Minnesota's technical assistance team. The program cost (not including travel) would be approximately \$500.

#### 2.4 Schedule

<u>Item</u>	<u>Completion Date</u>
1. CACI Seminars on Solvent Use	October 10, 1990
2. Hire Engineer	January 1, 1991
3. Audit Workshop with CSU	March 1991
4. Preliminary brochure, fact sheets telephone technical assistance services available	March 1, 1991
5. Collection of information and training of engineers	Ongoing
6. First site visits (audits) to to provide technical assistance	March 1, 1991

## COLORADO WASTE REDUCTION PROGRAM

### UPDATE/SUPPLEMENT TO THE WORKPLAN

#### Survey of Needs

The attached survey will be mailed to the 70 manufacturers who are also large quantity generators of hazardous waste. These companies account for over 90% of all the hazardous waste generated in Colorado and over 90% of all the toxic chemical releases.

The survey will tell us how many people work at each of these companies, which will help in the targeting of on-site assistance. The survey will also provide information on the companies' needs, and will give us a preliminary indication of how receptive they will be to assistance from our program.

Based on the results of the survey, the focus of our program and the appropriate blend of the various elements may change to better fit the needs of Colorado facilities.

#### 1.1 Seminars

It is unclear whether or not CACI still plans to sponsor the metal finishing workshop. If so, we will definitely assist them in any way we can (short of giving them money). If not, we will work with CSU and sponsor the workshop for metal finishing and ask CACI to co-sponsor it. We will do the same for a workshop for electronics manufacturing. Both of these would be after June 1991 as soon as we can organize and schedule them. We can afford approximately \$3,000 per workshop, which should be adequate, especially if CACI will provide some assistance.

My review of the hazardous waste generation data and SIC codes shows that these two industry types--metal finishing and electronics manufacturing--have very good potential for waste reduction and would be good targets for workshops. This is because there are a significant number of facilities in these categories (25 total) and they are mostly small or medium size. Also, there is a substantial amount of technical information available for these categories which could be disseminated through workshops.

#### 1.2 Information Center

Phone requests will be logged. The company and type of request will be recorded. Follow-up surveys will be mailed periodically to ask about general usefulness of the assistance received and any waste reduction achieved.

The largest generators or largest polluters (according to the TRI data) will be contacted directly and information will be offered to them based on their SIC codes.

### 1.3 On-Site Assistance

During the second year of the program, we will be better prepared to offer this type of assistance after attending the training in Minnesota and conducting two audits with CSU.

We will target manufacturers below a certain size, such as 200 employees, who have the largest releases or volumes of waste generated, and for which the best technical information is available.

In addition, as time allows, we will respond to requests for this type of assistance from any manufacturer or large quantity generator of hazardous waste.

### 1.5 Effectiveness Monitoring

In addition to monitoring the effectiveness of the information center as described above, companies receiving on-site assistance will be asked to provide follow-up information on the effectiveness of the assistance, including amounts of waste or releases reduced and dollar savings. In addition, follow-up surveys will be mailed to workshop attendees to ask about the general usefulness of the workshops and any waste reductions achieved.

### 1.6 Training of Regulatory Personnel

At a minimum, inspectors should be made aware of the role of pollution prevention/waste reduction in waste management and in controlling water discharges and air releases, and of the services offered by the waste reduction program.

**ATTACHMENT E**

**STATE OF HAWAII**



JOHN WAIHEE  
GOVERNOR OF HAWAII



JOHN C. LEWIN, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL MANAGEMENT DIVISION  
FIVE WATERFRONT PLAZA, SUITE 250  
500 ALA MOANA BOULEVARD  
HONOLULU, HAWAII 96813

In reply, please refer to:  
EMD / SHW  
H0121SA

January 24, 1991

Ron Ross  
Western Governor's Association  
600 17th Street  
Suite 1705 South Tower  
Denver, CO 80202-5442

Dear Mr. Ross:

Please find attached Hawaii's Capacity Assurance Plan update as required by the supplemental conditions agreed upon by Hawaii and EPA Region IX.

If you have any questions regarding this issue please call Steven Armann at (808) 543-8234.

Sincerely,

A handwritten signature in cursive script, reading "Arlene M. Kabel".

ARLENE M. KABEL, Manager  
Solid and Hazardous Waste Branch

ACTIVITIES TO ADDRESS  
SUPPLEMENTAL CONDITIONS AND CAP COMMITMENTS  
STATE OF HAWAII

The State of Hawaii Capacity Assurance Plan committed the state to address current and future capacity shortfalls through three (3) activities.

1. Further minimization of the wastes generated in the State.
2. Encouragement of hazardous waste treatment technologies which are compatible with Hawaii's fragile ecology.
3. Arrangements with other states for the types of management capacity which Hawaii is unable to provide.

The supplemental conditions agreed upon by Hawaii and EPA Region IX are addressed in the WGA regional response. The state of Hawaii does not have any supplemental conditions which are exclusive to Hawaii.

WASTE MINIMIZATION

The State of Hawaii is committed to pursuing hazardous waste minimization opportunities to the fullest extent possible, given the State's limited resources. The State approach to hazardous waste minimization has been to allow the strong economic disincentives, which are an inherent aspect of Hawaii's isolated location, propel generators to minimize their waste generation. However, now that waste minimization is at the top of EPA's hazardous waste management hierarchy and the state has agreed to possibly address treatment and disposal capacity planning shortfalls with waste minimization programs, the state is developing a more active role in encouraging waste minimization.

The state program is one of encouragement rather than requirement. At this time, the state does not believe that the hazardous waste situation warrants the development of regulatory mechanisms to induce waste minimization activities. First, the economics disincentives are very strong in Hawaii and second, the vast majority of the waste generated in Hawaii is from military sources which are difficult to regulate. In addition, the military in Hawaii has instituted a pilot waste minimization program, H-HAZMIN, which has established a 20 percent waste reduction goal for FY 1991 and a 50 percent reduction in overall waste generation by 1992 (using 1987 as the base year).

As noted in the 1987 CAP the economic disincentive to generate hazardous waste is relatively high in comparison to generators located in the Continental United States. The lack of commercial treatment and disposal facilities in the state dictates that all

commercially treated and disposed of hazardous waste must be transported approximately 2500 miles across the Pacific. In addition, the relatively small quantities of waste result in small transport loads which are more costly than bulked loads. The 1987 CAP estimated that it costs between \$1,000 and \$1,500 per 55 gallon drum to dispose of hazardous waste generated in Hawaii.

The 1987 CAP revealed that the military in Hawaii accounted for approximately 60% of the state's total hazardous waste generation (approximately 873 tons out of 1456 tons). Hence, commercial generation of hazardous waste accounted for approximately 583 tons, some of which was managed at captive facilities. Thus, the need to institute regulatory requirements for waste minimization activities, at this time, is not necessary.

The State of Hawaii received \$3011 grant funding to support one waste minimization position. The position description has been drafted (attached) and sent up the appropriate channels. The Department of Personnel Services must allocate the position and advertise the position prior to the Department of Health hiring an individual to fill the position.

While awaiting the establishment of the position, Hawaii has begun handing out waste minimization information to generators during inspections. The state also sent three representatives to the Waste Minimization Conference sponsored by EPA Region IX and held in Lake Tahoe. The Department of Health's commitment to waste minimization is exemplified by the fact that the Deputy Director for Environmental Health attended the conference along with two staff members of the Solid and Hazardous Waste Branch. The travel report (attached) provided the Department of Health with very specific recommendations for future waste minimization program planning.

The State of Hawaii contracted with Ross and Associates, using money appropriated from the CAP process, to investigate on-island treatment and disposal potential, and waste minimization options. The report was a very cursory investigation of this potential, however the report was able to narrow down areas which appear to have potential but which need additional study. The State is in the process of negotiating with Ross and Associates to conduct an in-depth study of the potential on-island treatment and waste minimization options.

#### ENCOURAGEMENT OF WASTE TREATMENT TECHNOLOGIES

The state has encouraged on-island waste treatment by contracting with Ross and Associates to study the potential for on-island treatment. The draft report has been delivered to the State and will be distributed throughout the hazardous waste industry upon finalization. The report takes a cursory look at Hawaii's waste streams and then identifies those waste streams which have economic potential for treatment on-island. This study has identified two treatment technologies which may have on-island

potential: halogenated solvents recovery and energy recovery. The state is in the process of contracting with Ross and Associates to conduct a follow up study the economic feasibility and barriers to development of these treatment technologies on-island.

ARRANGEMENT WITH OTHER STATES...

This commitment is fulfilled by remaining a good faith member of the WGA regional Capacity Assurance Planning process. The State intends to remain a member of the WGA regional agreement into the foreseeable future.

ENVIRONMENTAL MANAGEMENT DIVISION  
SOLID AND HAZARDOUS WASTE BRANCH  
HAZARDOUS WASTE PROGRAM

Environmental Health Specialist III  
POSITION NO.

POSITION DESCRIPTION

I. INTRODUCTION

This Environmental Health Specialist (EHS) III position is located in the hazardous waste program of the Solid and Hazardous Waste Branch, Environmental Management Division. The goal of the Solid and Hazardous Waste Branch is to protect public health and the environment from the improper management and disposal of hazardous waste and solid waste, and from the releases of petroleum and other hazardous substances from leaking underground storage tanks.

Under general supervision and direction of the Environmental Administrator (Chief) and the direct supervision of the Environmental Health Specialist V of the hazardous waste program, this EHS III position acts as the primary Hazardous Waste Minimization Officer. Through the exercise of chemical, scientific and industrial process knowledge, and independent initiative this position recommends and implements innovative outreach programs, reviews waste minimization plans, and provides public and technical assistance to minimize the generation of hazardous waste. Additionally, this EHS III position is responsible for recommending future administrative and regulatory programs and approaches to waste minimization, the conduct of public presentations, data gathering and analysis, assessing and evaluating industrial and chemical process changes to minimize waste generation, and the development of technical publications. These primary responsibilities of the position are achieved through advanced knowledge, training and experience in hazardous waste minimization, hazardous waste regulations, processes of the chemical industry, electronic information management systems, and public presentation procedures.

## II. Major Duties and Responsibilities

### A. Program Development Responsibilities

1. Recommends to the Hazardous Waste Program Supervisor and to the Environmental Administrator various alternative program approaches which the Department can implement to improve the effectiveness of the waste minimization program.
2. Responsible for coordinating the development of all alternative programs and for implementing appropriate programs as directed by the Environmental Administrator of the Branch.
3. Responsible for drafting hazardous waste minimization legislation and writing legislative testimony on the subject.

### B. Major Duties

1. Public and Technical Assistance 40%
  - a. Conducts on-site assessments of hazardous waste minimization opportunities, including the quantification of hazardous wastes generation data, the quantification of the potential reduction in hazardous waste generation, and the potential economic benefit associated with specific industrial process changes.
  - b. Conducts on-site visits to the management of hazardous waste generating facilities to encourage and promote management support for waste minimization activities.
  - c. Evaluates and assesses alternative chemical industry related industrial processes to determine their effectiveness in reducing the amount of hazardous waste generation.
  - d. Assists the public in obtaining information regarding the technology, benefits, barriers and programmatic approaches to hazardous waste minimization.
  - e. Develops and maintains an information library that acts as a clearinghouse for distribution to the public and industry on hazardous waste minimization.

- f. Conducts literature research on specific waste minimization issues/approaches pertaining to Hawaii's industry. Conducts literature research for small quantity generators to assist them with waste minimization and recycling of small quantities of hazardous waste.

2. Waste Minimization Plans 30%

- a. Reviews EPA required Hazardous Waste Minimization Plans to insure compliance with Federal and State laws and regulations.
- b. Provides assistance and recommendations regarding Hazardous Waste Minimization Plans in order to provide the generator with alternative approaches to waste minimization.

3. Outreach Programs 30%

- a. Prepares publications which provide pertinent and timely information on hazardous waste minimization technology, including chemical process changes.
- b. Prepares a periodic newsletter designed to stimulate interest in waste minimization alternatives; advertize the Department's position on waste minimization; and to provide continual interaction between interested individuals.
- c. Conducts multi-media public presentations on the economic, social and environmental advantages of hazardous waste minimization. Organizes forums, conferences, and meetings designed to disseminate technical and programmatic hazardous waste minimization information to generators of hazardous waste.
- d. Gathers and analyzes information pertaining to hazardous waste minimization technology, regulations, processes and other pertinent information for distribution to generators of hazardous waste.

B1105AMK

November 26, 1990

MEMORANDUM

To: Director of Health

Through: (1) Acting Chief, Environmental Management Division  
(2) Deputy Director for Environmental Health

From: Manager, Solid and Hazardous Waste Branch

Subject: Comments in response to Out-of-State Travel Report: Hazardous Waste Minimization Conference, Lake Tahoe

The most striking comment made in this report is that which relates to the conflict-of-interest involved when our HW regulatory program also assumes the responsibility for a HW minimization program. While we expect to play both roles simultaneously over the next couple of years, management must be mindful of the long-term impact of such an assignment.

The long-term placement of a HW minimization program might best be assigned to the Department's Health Education Office, but this office has historically focused its attention on medical/community health programs. The Health Ed Office should be encouraged/supported to expand its scope to environmental/pollution prevention programs, or, the Environmental Management Division must consider the development of its own such program.

I have interviewed a couple of individuals who are interested in the temporary federally-funded waste minimization position under our RCRA-C Grant. Drafting of the position description is near completion. We ask for administrative support in the timely establishment of that position, so that we can begin the early implementation of ideas brought back by Mr. Armann and Ms. Simmons from this conference.

ARLENE M. KABEI





STATE OF HAWAII  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL MANAGEMENT DIVISION  
FIVE WATERFRONT PLAZA, SUITE 250  
500 ALA MOANA BOULEVARD  
HONOLULU, HAWAII 96813

In reply, please refer to:  
EMD / SMW  
H1110SA

November 21, 1990

MEMORANDUM

To: Director of Health

Through: 1) Manager, Solid and Hazardous Waste Branch *ak*  
2) Acting Chief, Environmental Management Division  
3) Deputy Director for Environmental Health

From: Environmental Planner III  
Environmental Health Specialist III

Subject: Out-of-State Travel Report - Hazardous Waste  
Minimization Conference, November 13-15, Lake Tahoe,  
Nevada.

IMPLICATIONS FOR PROGRAM IMPROVEMENT

In 1980 Congress declared that it is the national policy of the United States to minimize the generation of hazardous waste wherever feasible. With this in mind, EPA established the following hierarchy as the priority for long term management of hazardous waste: 1) Source Reduction, 2) Recycling, 3) Treatment, and 4) Disposal. Source reduction is simply another term for waste minimization.

With this conference, EPA Region IX commenced its program of hazardous waste minimization. John Wise, EPA Region IX Deputy Regional Administrator, during his lunch time speech, emphasized EPA Region IX's long term commitment to waste minimization and he enthusiastically asserted that with the ushering in of waste minimization/pollution prevention programs we are entering a new era of environmental protection.

This conference provided the state with the necessary background information on present waste minimization efforts and the possible future direction of the EPA program for the state to begin to develop its own comprehensive waste minimization program. The conference provided a forum for information exchange and identification of information sources and individuals to assist in the development of a state program.

Thus, the conference provided the Hazardous Waste Program with the necessary information to guide the direction and training of the Hazardous Waste Program's Waste Minimization Coordinator. The Hazardous Waste Minimization Coordinator is a federally funded temporary position for FY91. The funding for this position was obtained in the RCRA §3011 FY91 grant. Unfortunately, the position has not yet been established. Presently, the Position Description is in the draft stage and will soon be sent up the appropriate channel.

While awaiting the establishment and filling of the Waste Minimization Coordinator position, the state should continue its present efforts. The present program consists of the following efforts:

- 1) Developing a library of clearinghouse information.
- 2) Providing limited technical assistance to generators of hazardous waste.
- 3) Attending waste minimization training courses and conferences with EPA.
- 4) Conducting limited SQG outreach programs.
- 5) Obtaining waste minimization information through the Pollution Information Exchange Service (PIES).

#### NARRATIVE

The conference began with three panelists discussing waste minimization efforts at the national, regional, and local level. Laura Yoshii, EPA Region IX Deputy Director Hazardous Waste Management Division outlined Region IX's waste minimization programs and goals. Donna Chen of the city of Los Angeles provided an overview of the program they instituted at the city level and Lisa Brown of EPA's Risk Reduction Engineering Laboratory discussed the efforts they are making in waste minimization.

Specific attention was given to the waste minimization efforts in the state of California and in Region IV. California has enacted a law (commonly called SB 14) which requires generators of more than 1200 kg/month of hazardous waste to prepare a waste minimization plan. The intent of this plan is not to regulate generators but rather to make them aware of the potential financial savings associated with waste minimization. The waste minimization program in Region IV is well established. The Region has a variety of established state programs as well as a regional support program to assist the state programs. As a matter of contrast, EPA Region IX is just beginning its waste minimization program.

Break out groups were formed to discuss and brain storm issues such as intra-state and inter-state strategies for waste minimization, enforcement mechanisms to encourage waste minimization, requiring waste minimization in TSD permits, and using inspections to promote waste minimization.

Various speakers also provided information on waste minimization training opportunities and future training needs. The Director of the Tennessee Center for Industrial Service's Program discussed their retired engineer training and technical assistance program. Also a speaker from the EPA Pollution Prevention Information Clearinghouse provided training on their electronic information bulletin board.

## RECOMMENDATIONS


Considering EPA's strong commitment to waste minimization we should expect that additional funding for waste minimization will be available in the \$3011 grant in FY 1992. In addition, funding sources for state hazardous waste minimization projects will be published in upcoming Federal Registers. The state should consider applying for upcoming grants and consider an increase in the personnel size and budget during the FY 1992 \$3011 grant negotiations.

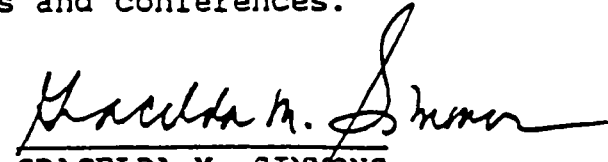
The State needs to begin planning a comprehensive waste minimization program, possibly including legislation similar to California's SB 14, which demonstrates our commitment to hazardous waste minimization.

Any long term comprehensive hazardous waste minimization program needs to be kept separate from the inspection/enforcement activities and personnel of the hazardous waste program. An effective waste minimization program, even with legislation, is basically voluntary. During the conference it was overwhelmingly agreed that these two programs (waste minimization and regulatory monitoring/compliance) cannot work effectively together. First, an inherent conflict of interest will occur if these two programs are combined using the same personnel. When providing technical assistance an inspector may find a violation and is then confronted with the dilemma of being an enforcer or technical assistance provider. Second, generators are often leery of inviting inspection/enforcement personnel to their place of business regardless of their capacity as waste minimization technical assistance provider. However, in the interim, prior to development of a comprehensive program, inspectors should be used to disseminate information and encourage generators to minimize their waste generation.

Personnel responsible for implementing the state's waste minimization program should be sent to a course to conduct waste minimization assessments. Such a course is offered by the Tennessee program for retired engineers, which was discussed during the conference. This training is essential for any on-site waste minimization technical assistance program.

The state should take an active role in participating with Region IX in the development of a regional waste minimization program. This will include maintaining an open line of communication with the waste minimization coordinator for Region IX and attending EPA sponsored workshops and conferences.

  
STEVEN S. ARMANN  
Environmental Planner

  
GRACELDA M. SIMMONS  
Env. Health Specialist

**ATTACHMENT F**

**STATE OF IDAHO**



State of Idaho  
DEPARTMENT OF HEALTH AND WELFARE  
Division of Environmental Quality

1410 N. Hilton  
Boise, Idaho 83706

CECIL D. ANDRUS  
Governor  
RICHARD P. DONOVAN  
Director

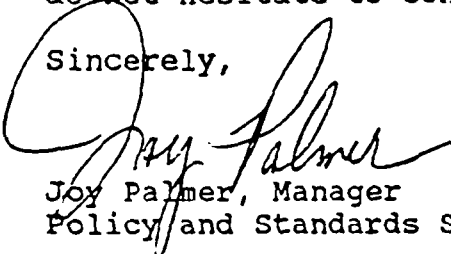
January 29, 1991

Mr. Ronald Ross, Program Manager  
WGA Hazardous Waste Technical Group  
600 17th Street, Suite 1705  
South Tower  
Denver, CO 80202-5442

Dear Mr. Ross:

Enclosed is an update on the State of Idaho's waste minimization programs and activities. If you have questions or comments, please do not hesitate to contact me or John Brueck at 208-334-5879.

Sincerely,

  
Joy Palmer, Manager  
Policy and Standards Section

JP/JZF/ba

Enclosure



Printed on Recycled Paper

## Idaho Waste Minimization Program Activities

January 29, 1991

The Idaho Waste Reduction Assistance Program (IWRAP), a federally-funded seed program at the Division of Environmental Quality, Department of Health and Welfare, has promoted reduction and recycling of solid and hazardous waste. A data clearinghouse has been developed, featuring a toll-free hotline and video-lending library. The program responded to over 1,300 information requests in 1990, providing assistance to individuals, businesses, and government agencies. Many of these requests came from parties who needed waste minimization assistance or were establishing recycling programs. "WRAP-pak" information packages dealing with household hazardous waste, used oil, and residential recycling were developed and distributed. Through the program's efforts, Idaho was linked to a number of waste exchanges operating throughout the Pacific Northwest.

IWRAP has sponsored three pilot projects:

1. A pesticide container management project developed in conjunction with the University of Idaho's Cooperative Extension system (District II).
2. A model was constructed for municipal governments to determine the feasibility of community recycling programs. This was developed through Boise State University.
3. A recycling awareness program was developed and implemented throughout the Division of Environmental Quality. This program has prompted office recycling efforts in many state offices as well as in private businesses.

IWRAP has linked Idaho to nationwide and regional recycling efforts through waste reduction roundtable meetings. These roundtables have served to facilitate the evaluation of a retired engineer's program and participation in regional waste minimization projects.

IWRAP also seeks to integrate pollution prevention into regulatory and legislative activities, and to raise the profile of waste reduction concepts throughout Idaho.

JZF/ba

**ATTACHMENT G**

**STATE OF NEVADA**



BOB MILLER, Governor

STATE OF NEVADA



Administration (702) 687-4670  
Air Quality 687-5065  
Mining Regulation and Reclamation 687-4670  
Waste Management (702) 687-5872

Water Permits and Compliance 687-4670  
Water Quality Planning 687-4670  
Wastewater Treatment Services 687-5870

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL PROTECTION

123 W. Nye Lane  
Carson City, Nevada 89710

January 29, 1991


Ron Ross  
Western Governors' Association  
600 17th Street  
Suite 1705 South Tower  
Denver, Colorado 80202-5442

Dear Ron:

Enclosed is a description of Nevada's waste minimization program for submission to EPA. This document should fulfill the waste minimization requirement outlined in Nevada's supplemental conditions.

If you need any further information, please let me know.

Sincerely,

  
Colleen Cripps, Ph.D.  
Environmental Specialist  
Waste Management Bureau

Enclosure

cc: Rebecca Smith, EPA Region IX

## Nevada's Waste Minimization Strategy

As of January 31, 1991, the State of Nevada is in the process of developing a formal waste minimization program. This program consists of three project areas.

First, the State has contracted with the Nevada Small Business Development Center (NSBDC), of the University of Nevada-Reno, to provide technical assistance and on-site waste audits, and develop a waste minimization library. The NSBDC is in the process of hiring the waste minimization personnel that will be providing the technical assistance. It is anticipated that the waste audits will be conducted by university faculty and graduate students in Toxicology and Environmental Engineering knowledgeable in waste minimization.

Secondly, a generator survey is being developed under the auspices of the Capacity Assurance Program. This survey is designed to gather a wide range of information including a description of any current waste minimization efforts being conducted by the businesses surveyed and will provide an indication of a facilities interest in receiving waste minimization information and/or participating in the on-site waste audits. Industry specific waste minimization seminars will be planned based on the information collected. This survey will be conducted door-to-door and will include, not only known generators, but any business with the potential to generate hazardous waste. At this point, the survey is being limited to Washoe County, one of the state's two population centers. Expansion of the survey to Clark County, the State's other population center, will be considered based on the results of this pilot project.

Finally, the State is considering developing a public awareness and public participation campaign to include a partners program, certificates of appreciation, brochures, and public service announcements. Under the partners program, participating companies would sign a contract agreeing to distribute waste minimization brochures to employees, encourage employees to follow good housekeeping procedures and implement any economically

feasible company wide changes that will result in waste minimization. Certificates of appreciation would be presented to businesses demonstrating the implementation of waste minimization practices. Public service announcements, highlighting those businesses with successful waste minimization programs, would be developed and distributed to all television and radio stations within the State. Those businesses that participate in the partners program would also receive posters and window stickers which would indicate to the general public that the businesses they patronize are implementing environmentally sound practices. As the general public becomes more environmentally aware, public pressure will increase on those businesses that use hazardous materials and generate hazardous waste. It is hoped that a campaign of this nature will generate an interest in pollution prevention, and will result in a statewide spirit of cooperation and public concern.

**ATTACHMENT H**

**STATE OF CALIFORNIA**

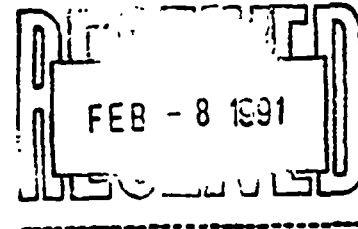
## DEPARTMENT OF HEALTH SERVICES

14/744 P STREET  
P.O. BOX 942732  
SACRAMENTO, CA 94234-7320  
(916) 323-9723



JUN 27 1990

Mr. Daniel W. McGovern  
Regional Administrator  
U.S. Environmental Protection Agency  
1235 Mission Street  
San Francisco, CA 94103



Dear Mr. McGovern:

Enclosed for approval is the State of California's submittal of the first milestone of the Capacity Assurance Plan (CAP), as requested in your letter of March 14, 1990. The submittal consists of the following items:

- o A summary of data regarding on-site waste generation and management from California counties' hazardous waste management plans (prepared pursuant to AB 2948 [Tanner]).
- o A transmittal letter which accompanied the Department of Health Services' (Department) submittal of 1987 Biennial Generator Report data. This submittal was made earlier at the request of EPA.
- o A report on the Low-Level Radioactive Waste Act survey conducted by the Department as part of a mixed waste management needs assessment.
- o The status report on California's effort to minimize the volume of incinerable wastes generated in California.
- o A discussion of any short-term steps that could reduce the need for incineration capacity in the short run.
- o Reports on the status of siting and permitting of new hazardous waste management capacity.

We will forward a copy of "California's Non-Recurrent Hazardous Waste Report" under a separate cover. The report is in publication and will be available in mid-July.

Mr. Daniel W. McGovern  
Page 2

JUN 27 1990

If you have any questions about the enclosed material, please contact me or James T. Allen, Ph.D., Chief, Alternative Technology Division, at (916) 322-2822.

Sincerely,

ORIGINAL SIGNED BY

C. DAVID WILLIS

C. David Willis  
Deputy Director  
Toxic Substances  
Control Program

Enclosures

CDW:SK:sk/lkm

## ON-SITE HAZARDOUS WASTE MANAGEMENT

The attached table summarizes on-site management of hazardous waste in California, based on information obtained from the County Hazardous Waste Management Plans prepared under AB 2948 (Tanner, 1986). The data represent wastes managed in the year 1986. Both RCRA and non-RCRA wastes are included, largely because counties were not required to distinguish between the two categories, but also because it is not always possible to separate RCRA and non-RCRA wastes in California's waste reporting categories.

With over 14 million tons of management capacity, aqueous inorganic treatment is by far the largest category, followed by aqueous treatment with two million tons capacity and land treatment with 1.6 million tons capacity. Percent utilization ranges from 1.6 percent (land treatment) to 52.4 percent (solvents recovery).

Also attached is a letter which accompanied the Department of Health Services' recent transmittal to Westat, Inc., EPA's contractor for CAP data management. Westat, Inc. received two 20 megabyte Bernoulli diskettes containing 1987 Biennial Report data, which includes on-site hazardous waste generation and management data.

Analysis of on-site hazardous waste management was required as part of the CAP because any shortfalls in on-site management capacity will impact commercial capacity. While projections of on-site demand have not yet been made, it does not appear that any shortfalls will develop. A more complete analysis of on-site capacity and demand will be included in the 1991 CAP.

**COMPARISON OF 1986 HAZARDOUS WASTE MANAGEMENT  
CAPACITY WITH CAPACITY UTILIZATION OF ON-SITE FACILITIES  
(AS REPORTED IN THE COUNTY HAZARDOUS WASTE MANAGEMENT PLANS)**

<b>Sara Management Category</b>	<b>Maximum Capacity (tons)</b>	<b>Management Demand (tons)</b>	<b>Remaining Capacity (tons)</b>	<b>Percent Utilization</b>
Metals Recovery	0	0	NA	NA
Solvents Recovery	1,722	903	819	52.4
Other Recovery	5,166	1,706	3,460	33.0
Incineration*	226,700	92,270	134,430	40.7
Energy Recovery	0	0	NA	NA
Aqueous Inorganic	14,347,781	5,721,725	8,626,056	39.9
Aqueous Organic	2,150,583	558,541	1,592,042	26.0
Other Treatment	12,184	63	12,121	0.5
Sludge Treatment	0	0	NA	NA
Stabilization	12,090	250	11,840	2.1
Land Treatment	1,629,136	26,645	1,602,491	1.6
Landfill	139,805	3,976	135,829	2.8
Deepwell Injection	0	0	NA	NA
Other Disposal	144,250	69,455	74,795	48.2
		6475471		

\* County Plans did not break incineration into liquids and solids/sludges.  
(lm27comp)



## DEPARTMENT OF HEALTH SERVICES

714/744 P STREET

P.O. BOX 942732

SACRAMENTO, CA 94234-7320

(916) 324-1784



February 16, 1990

Ms. Cassie Thompson  
Westat, Inc.  
1500 Research Blvd.  
Room TO335  
Rockville, Maryland 20850

Dear Ms. Thompson:

Enclosed please find the State of California's 1987 Hazardous Waste Report information. As previously discussed, the information is inclusive of the data that was collected from the State's generators and the treatment, storage, or disposal facilities. It is being submitted on two 20 megabyte Bernoulli diskettes.

If you have any further questions, please contact Dana Colclasure of my staff at (916) 445-9529.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Jay Ant for'.

Donald A. Johnson, Chief  
Surveillance and Enforcement Unit  
Program and Administrative  
Support Division  
Toxic Substances Control Program

Enclosure

Report to  
California Department of Health Services  
and the  
States of the Southwestern Compact

**FINAL**

**CONCEPTUAL MIXED WASTE  
MANAGEMENT PLAN**

Ebasco Environmental  
A Division of EBASCO SERVICES INCORPORATED

December 22, 1989

## **CALIFORNIA'S FOCUSED WASTE MINIMIZATION EFFORTS**

California has recently completed and submitted its Capacity Assurance Plan (CAP) fulfilling the federal requirements of Section (c) (9) of the Comprehensive Environmental Response and Compensation Act (CERCLA). California's CAP demonstrates that California will meet its hazardous waste management needs through an integrated waste minimization program and future facility sitings. California will not rely on other states' hazardous waste capacity to manage California's hazardous waste. The CAP identified a capacity shortfall for incinerable wastes in California. Therefore, to meet its CAP commitments California will focus on the minimization of wastestreams which require incineration.

This Incinerable Waste Minimization Project is a two year effort. The Department of Health Services' (Department) Toxic Substances Control Program will work directly with the historically largest generators of the targeted wastestreams in California. The project will focus on working with industry on a cooperative/voluntary basis. Companies which enter into a voluntary agreement with the Department will have the resources of Department staff available for assisting them in implementing a waste minimization program in their businesses. The assistance can be economic in the form of a grant made under Assembly Bill 685, technology transfer, information on regulations or their interpretation, or priority in interaction with the Department. Regardless of the motivation for participating in this project, these companies will have a definite advantage when new and future regulations are in place requiring waste reduction plans, such as California's Senate Bill 14.

Any companies which may choose not to participate in this project will be periodically monitored to evaluate the effectiveness of their hazardous waste management programs, including any waste reduction technologies implemented. If these companies require a permit renewal or modification, waste minimization language will be included in the new permit by the Department. Also, if any violations are noted during periodic inspection of these companies by Department staff, waste minimization options will be incorporated into any corrective action order or enforcement agreement.

The Department would like to work with industry on a voluntary basis, but the Department also feels this project is a very high priority for California. Therefore, the Department will include all identified incinerable waste generators in this project.

## WASTE MINIMIZATION EFFORTS SHORT TERM STEPS

California has developed several steps to implement the Incinerable Waste Minimization Project (Project) described above. These steps were developed with the specific objective of reducing the volume of wastes requiring incineration by 50 percent by December 31, 1992. California has targeted its efforts on the largest generators and facilities statewide. California intends to accomplish the reduction with no net increase of incinerable wastes from other facilities or to other media.

California has completed several of the Project's steps in order to reduce the need for incineration capacity in the short term. Among other things these steps include:

1. Develop a comprehensive generator data base;
2. Identify the largest generators;
3. Meet with the largest generators and facilities;
4. Finalize the Project strategy after meeting with the generators and facilities;
5. Offer the generators and facilities voluntary consent to comply with the requirements of the Project.

California has successfully adhered to the Project's time schedule and is confident that the objective of the Project will be accomplished by the December 31, 1992 deadline. Progress towards this objective will be reported in subsequent milestone reports and will form a major element of the October 17, 1991 Capacity Assurance Plan.

**STATUS OF SITING AND PERMITTING  
OF ADDITIONAL CAPACITY**

**(Expansions of Existing or New Facilities)**

California's Capacity Assurance Plan (CAP) identified future shortfalls in capacity for managing incinerable liquids and solids/sludges. While California plans to rely primarily on waste minimization to offset the need for new capacity, additional capacity will also be necessary to meet current and future demands.

There are a number of proposed facilities which could provide additional incineration capacity by 1995. The attached table summarizes the status of these proposed or newly permitted facilities. Permit decisions are pending for two commercial and two on-site facilities. These permit applications represent a potential 228,400 tons per year of commercial and 7,000 tons per year of on-site capacity. An additional 22,500 tons per year of commercial capacity (California Thermal Treatment Systems) has already been permitted but is not yet constructed. A fourth commercial facility (National Cement) is planning to increase its capacity to 38,986 tons per year, an increase of almost 19,000 tons per year over the existing capacity reported in the CAP (Table 4-1a, page 97).

Permits have recently been issued for two on-site facilities, adding a total of 3,522 tons per year of additional capacity. Permits have been denied for three on-site facilities.

Future updates on permitting and construction activity will be included in regular CAP milestone reports and in the 1991 CAP.

## Status of Permits For New Incineration Capacity

Facility Name	County	Capacity (tons/yr)		Status
		Existing	Proposed	
<u>Commercial Facilities</u>				
<u>Energy Recovery</u>				
1. National Cement	Kern	38,986	--	Permitted to increase capacity 6/90
<u>Incineration: Solids/Sludges</u>				
2. California Thermal Treatment Systems	Los Angeles	0	22,500	Permitted but not yet constructed
3. Chemical Waste Management	Kings	0	86,400	Permit decision pending
<u>Incineration: Liquids</u>				
4. Rhone-Poulenc (Stauffer)	Contra Costa	0	142,000	Permit decision pending
<u>On-Site Facilities</u>				
<u>Incineration: Solids/Sludges</u>				
5. Dow Chemical	Contra Costa	0	2,640	Permit decision pending
<u>Incineration: Liquids</u>				
6. Dow Chemical	Contra Costa	0	4,360	Permit decision pending

# **Status of Permits For New Incineration Capacity**

Facility Name	County	Capacity (tons/yr)		Status
		Existing	Proposed	
<u>Various*</u>				
7. Aristech Chemical	San Bernardino	1,294	415	Permit issued 9/89
8. Ashland Chemical Co.	Los Angeles	0	3,107	Permit issued 9/89

Permits were denied for the following on-site facilities:

9. Carguil Inc.	Los Angeles	1,750	1,581	
10. Lawrence Livermore	Alameda	0	2,650	
11. Lawrence Livermore (Site 300)	San Joaquin	0	14	

\* Wastes at these facilities were not able to be separated into SARA management categories.

**ATTACHMENT I**

**STATE OF MONTANA**



DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL SCIENCES

Solid and Hazardous Waste Bureau

STAN STEPHENS, GOVERNOR

FAX # (406) 444-1499



STATE OF MONTANA

OFFICE 836 Front Street  
LOCATION: Helena, Montana

MAILING Cogswell Building  
ADDRESS: Helena, MT 59620

Waste Management Section  
(406) 444-1430

January 29, 1991

Ronald W. Ross  
Program Manager  
Western Governor's Association  
600 17th Street  
Suite 1705 South Tower  
Denver, CO 80202-5442

Dear Mr. Ross:

Enclosed please find an update of Montana's current waste minimization program and activities. I hope that this information will be sufficient for the reporting needs to EPA.

If you have any questions on this matter, please call or write.

Sincerely,

A handwritten signature in cursive script, appearing to read "Don Vidrine".

Don Vidrine  
Hazardous Waste Program

It is anticipated that the assessment will be completed by the end of January, 1991.

The SHWB currently is negotiating with the Western Governor's Association to use a contractor to evaluate the potential of requiring certain waste minimization/reduction conditions in RCRA permits. It is anticipated that this evaluation will include: a review of the legal limitations of imposing such conditions in a RCRA permit; and an assessment of the impact of requiring such conditions to specific permit applications.

The SHWB maintains a policy of, whenever applicable, including waste minimization/reduction requirements in state hazardous waste enforcement settlements. Such requirements are normally included in overall waste management planning that is stipulated as a condition of settlement. Currently, the bureau is involved in three major enforcement actions where waste minimization/reduction activities are being considered as partial conditions for settlement.

The SHWB continues to maintain a chlorinated solvent registration program with 199 solvent users currently registered. While it is difficult to quantify the impact of this program, it is apparent that the registration requirements have been a factor in the reduction of waste chlorinated solvents in the state.

## STATE OF MONTANA

### WASTE MINIMIZATION PROGRAM

The State of Montana through Solid and Hazardous Waste Bureau (SHWB) continues the maintenance of an overall waste minimization program. A major portion of the program is channeled through the Capacity Assurance Planning (CAP) process. The state of Montana is participating in a regional CAP approach which is coordinated through the Western Governor's Association. All states participating in this regional approach are committed to investigating and when appropriate implementing a waste minimization program. The SHWB through the CAP process is developing a strategy for the establishment of a waste minimization plan. That plan which is formalized in an annual State EPA Agreement, at a minimum, encompasses the following work tasks:

- o Identification of existing/potential waste minimization processes available to Montana generators;
- o Identification of resources and regulatory changes that may impact the implementation of waste minimization programs;
- o Evaluate the potential of including waste minimization requirements in facility permits;
- o Identify specific potential waste minimization activities through routine inspections of hazardous waste generators and facilities;
- o Maintain a strategy for including, where possible, waste minimization requirements in hazardous waste enforcement settlements.

Through a Western Governor's Association contractor, the SHWB has completed an analysis of the major hazardous waste generating industries and assessed the potential to minimize waste within each of these industries. This assessment will be incorporated in the final CAP document.

Through the CAP process, the state has identified that the equivalent of a .5 FTE is devoted to waste minimization/reduction effort. However, it must be understood that this work effort is subject to change as program priorities dictate.

Again, through a Western Governor's Association contractor, the SHWB is completing an assessment of the impact of regulatory change on hazardous waste generators. A major effort of this assessment is to determine the impact as a result of the advent of the Toxicity Characteristic rule on waste minimization/reduction.

**ATTACHMENT J**

**STATE OF NORTH DAKOTA**



NORTH DAKOTA  
STATE DEPARTMENT OF HEALTH  
AND CONSOLIDATED LABORATORIES

State Capitol  
Bismarck, North Dakota 58505

ENVIRONMENTAL HEALTH SECTION

RE: State Capacity Demonstration Project  
RCRA - Waste Minimization

1200 Missouri Avenue  
P.O. Box 5520  
Bismarck, North Dakota 58502-5520

January 25, 1991

RONALD ROSS  
PROGRAM MANAGER  
WESTERN GOVERNORS ASSOCIATION  
600 17TH ST  
SUITE 1705 SOUTH TOWER  
DENVER CO 80202-5442

Subj: WGA Hazardous Waste Capacity Assurance Program

Dear Mr. Ross:

Enclosed is the Waste Minimization Program Strategy for North Dakota as required by James Scherer, Regional Administrator, USEPA Region VIII. The North Dakota Waste Minimization Program Strategy implements the requirement of Supplemental Condition IV of North Dakota's Capacity Assurance Plan.

The Regional Capacity Shortfalls Update, Supplemental Condition I, is being compiled by the WGA.

The strategies for Supplemental Conditions II and III, waste treated in exempt processes and mixed wastes, were addressed in a letter from Governor Sinner, North Dakota to James Scherer, USEPA Region VIII dated August 1, 1990 (enclosed). No further submissions are required at this time.

We understand that the WGA will combine all state reports and submit them to EPA by February 15, 1991. If you have any questions concerning the Waste Minimization Program Strategy, please contact me.

Sincerely,

Martin R. Schock, Director  
Division of Waste Management

MRS:PLD:ljb

Encls.

cc: Rob Greenwood, Ross & Associates  
Francis Schwindt



GEORGE A. SINNER  
GOVERNOR

# State of North Dakota

OFFICE OF THE GOVERNOR  
BISMARCK, NORTH DAKOTA 58505  
(701) 224-2200

August 1, 1990

James J. Scherer  
Regional Administrator  
U.S. EPA - Region VIII  
Denver Place - Suite 500  
999 18th Street  
Denver, Colorado 80202-2405

Dear Mr. Scherer:

In your letter dated July 3, 1990, you requested our plans in the form of a Letter of Intent for implementing requirements of supplemental conditions as a prerequisite requirement of your approval of our State's Capacity Assurance Plan. The State of North Dakota agrees to carry out these conditions by implementing the following:

## I. REGIONAL CAPACITY SHORTFALLS

- A. By January 31, 1991, the State of North Dakota, in cooperation with other western states and coordinated by the Western Governors' Association (WGA), will provide estimates of timelines when the regional capacity shortfalls will be resolved.
- B. Beginning November 30, 1990, and every year thereafter, an update will be provided to EPA regarding the status of treatment and disposal facilities by states participating in the Western Regional Capacity Agreement. This update will also be coordinated by the WGA.
- C. If capacity shortfalls continue and are not resolved by November 30, 1991, North Dakota, in cooperation with the other western states and coordinated by the WGA, will provide milestones identifying specific tasks and activities to address shortfalls. The specific task and activities will be submitted with the November 30, 1991, Update Report to EPA.

## II. WASTE TREATED IN EXEMPT PROCESSES

This State has no independent data collection mechanisms to identify wastes in this category. The State will work with WGA and EPA to include these data in the event that such data become available through the biennial, reporting process or other national means provided by EPA.

Enclosure (1)

North Dakota will identify data on RCRA hazardous waste being treated in RCRA-exempt processes by the use of available data. Obstacles that may be encountered in the collection of this data are possible mistakes made by the generators when filling out the reporting forms. These mistakes may occur when the generator authorized agent completes these reporting forms but may be unfamiliar with the generator's operation and/or RCRA process. Other difficulties may be encountered in the interpretation of instructions for completing the forms. The quality of the reported data for each generator will be evaluated.

### III. MIXED WASTES

Non-federal mixed wastes are considered to be de minimis or controlled under a separate set of federal statutes and not subject to this condition. However, by January 31, 1991, if necessary, North Dakota can develop a state plan to collect data on mixed hazardous and radioactive waste. In the plan, an inventory of the facilities that generate mixed waste will be identified. There will be no need to provide methodology on how to obtain data from remedial actions dealing with these mixed wastes due to the fact there are no remedial actions ongoing or planned which will produce mixed radioactive waste.


### IV. WASTE MINIMIZATION ACTIVITIES

Ross and Associates of Seattle, Washington is the consulting company currently assessing the waste minimization potential for North Dakota. This study will aid in determining if it is practical for the State to implement a formal waste minimization program. The report should be completed in October, 1990.

By January 31, 1991, the State of North Dakota will develop a hazardous waste minimization strategy including any necessary requirements of treatment, storage or disposal facilities to assess the opportunity for waste minimization, pursuant to Section 33-24-05-40(2)(i) of the North Dakota Hazardous Waste Management Rules, Article 33-24, North Dakota Administrative Code (NDAC) (40 CRF 264.73(b)(9)). The State will monitor progress of these facilities through manifest reviews and compliance evaluation inspections. The State will consider creating incentives through enforcement consent agreements with these facilities when appropriate, and on a case-by-case basis or with waste generators.

If you have any questions concerning the State's intentions as described above, please contact Martin R. Schock of the North Dakota State Department of Health and Consolidated Laboratories, Division of Waste Management.

Sincerely,

  
George A. Sinner  
Governor

GAS:dlb

cc: Martin R. Schock  
Ron Ross

## WASTE MINIMIZATION PROGRAM STRATEGY FOR NORTH DAKOTA

### PREPARED BY THE NORTH DAKOTA STATE DEPARTMENT OF HEALTH AND CONSOLIDATED LABORATORIES

As required by Section 104(c)(9) of CERCLA, on October 13, 1989 and as subsequently revised on March 21, 1990, the State of North Dakota submitted its hazardous waste Capacity Assurance Plan (CAP) to the U. S. Environmental Protection Agency (EPA). In a letter dated July 3, 1990, the EPA approved North Dakota's CAP with the understanding that the State would undertake certain measures and provide information specified in Supplemental Conditions enclosed with their letter. Supplemental Condition No. IV specifies the State of North Dakota will develop a hazardous waste minimization strategy.

In developing an initial strategy, the report entitled "State of North Dakota Hazardous Waste Minimization Program Planning," Volumes I and II, prepared by Ross and Associates was utilized. In this report, three primary activities were completed: (1) researching hazardous waste generation in the State; (2) identifying waste minimization opportunities for selected industrial groups; and (3) investigating the design and service components of public sector programs that promote waste minimization in other states. Four primary conclusions are indicated from this report:

1. Current hazardous waste generation and minimization in the State dictates the selection and design of service components for a public waste minimization program.
2. Hazardous waste generators can minimize the quantity of waste they generate, but many have already done so.
3. North Dakota may initially consider a low intensity waste minimization program.
4. Before attempting to design and implement any specific program or options, North Dakota should complete a public waste minimization program needs assessment.

A public waste minimization program needs assessment, expanding on the report "State of North Dakota Hazardous Waste Minimization Program Planning," is essential for evaluating the extent to which a waste minimization program is to be developed.

As part of the CAP, Supplemental Condition IV, the State of North Dakota Waste Minimization Strategy addresses the following items required per the letter from EPA dated January 17, 1991:

1. Identification of the existing and potential new areas of waste minimization for the State will be completed through a Phase III Waste Minimization Workplan with Ross & Associates. The Workplan covers four tasks: (1) identify industry focus;



(2) characterize waste minimization potential; (3) conduct a needs assessment; and (4) prepare the report.

In particular, the Workplan will include an effort to hold meetings with a variety of hazardous waste generators to ascertain their level of waste minimization awareness; to what extent waste minimization activities have been undertaken; and the type of public sector activity that can best inspire further waste minimization activities.

2. The Phase III Workplan with Ross & Associates will summarize the current state of waste minimization activity and selected industries and prepare recommendations for specific waste minimization program activities. Presently, no constraints on resources or authority impact implementation of this program.
3. The State will participate in the permit writer's training course being developed by EPA through their contractor, Science Application's International Corporation, to fulfill the requirement for review of RCRA permits for potential to include waste minimization requirements.
4. State inspections of RCRA facilities will include identification of waste streams to determine if waste streams may be potential candidates for waste minimization.
5. The State will monitor progress of RCRA facilities through manifest reviews and compliance evaluation inspections. The State will consider creating incentives through enforcement consent agreements with these facilities when appropriate and on a case-by-case basis.

This waste minimization strategy will result in a report providing specific recommendations for the type of waste minimization program initiatives which will best make sense for the State of North Dakota.



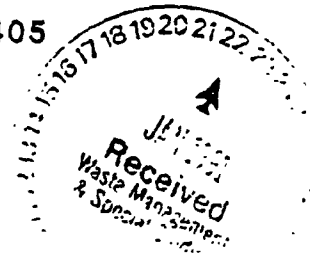
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2405

Ref: 8HWM-RI

JAN 17 1991



Mr. Jeffery L. Burgess, Coordinator  
Hazardous Waste Program  
North Dakota State Department of Health  
and Consolidated Laboratories  
P.O. Box 5520  
Bismark, North Dakota 58502-5520

Dear Mr. Burgess:

As part of the Capacity Assurance Plan supplemental conditions, the State of North Dakota agreed to develop a hazardous waste minimization strategy that will identify a program development plan. This strategy should address the following items:

1. Identification of the existing and potential new areas of waste minimization techniques available to the State.
2. Identification of the resources, authorities, and other constraints or issues which could impact implementation of these new programs.
3. Review of RCRA permits for the potential to include waste minimization requirements.
4. State inspection of RCRA facilities to identify waste streams which are candidate for waste minimization.
5. Development of a strategy for including waste minimization requirements in State enforcement settlements with RCRA facilities.

As we discussed during the last Western Governors Association meeting, you should include the Permit Writers Training Course being developed by EPA as part of your strategy. It will fulfill requirement number 3 above. Additionally, it was agreed that the States would submit this strategy report to Ross & Associates by January 31, 1991, who will combine all State reports and submit them to EPA February 15, 1991.

Enclosure (2)

The information you requested on resources available to your State agency from the CORE grant program for Capacity Assurance Planning is detailed in the attached list.

If you have any questions concerning this information, I can be reached at (303) 293-1705.

Sincerely,

A handwritten signature in cursive script, reading "Marie B. Zanowick".

Marie B. Zanowick, Manager  
Hazardous Waste Minimization Program

Attachment

cc: Ron Ross, WGA  
Bill Ross, Ross & Associates

CORE GRANT FUNDING FOR FY '91 - '92 - '93

U.S. EPA REGION VIII

The following funding for Capacity Assurance Plan activities has been provided by U. S. EPA Region VIII to the Region VIII States:

UTAH: 0.5 FTE at an hourly rate of \$16.00  
Total = \$16,640/year

COLORADO: 0.5 FTE to be used to fund a Project Engineer,  
Project Management, and Technical Review.  
Total = \$24,108/year

SOUTH DAKOTA: CAP Development and Review \$ 3,900  
CAP Project Management Supervision 5,600  
CAP Staff Supervisor 3,600  
CAP Development and Review 1,400  
Total = \$14,500/year

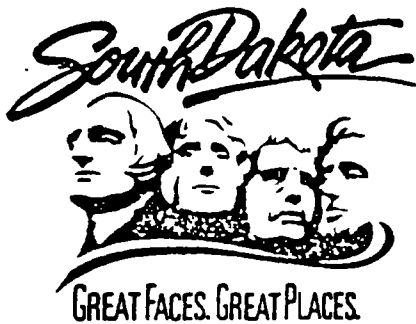
NORTH DAKOTA: None requested

WYOMING: None requested

MONTANA: None requested

**ATTACHMENT K**

**STATE OF SOUTH DAKOTA**



## DEPARTMENT OF WATER & NATURAL RESOURCES

Joe Foss Building  
523 East Capitol  
Pierre, South Dakota 57501-3181

24 January 1991

Mr. Ronald Ross  
Western Governors' Association  
600 17th Street  
Suite 1705 South Tower  
Denver, Colorado 80202-5442

Dear Mr. Ross:

This letter provides you South Dakota's hazardous waste minimization strategy. This strategy has been developed in response to EPA's waste minimization requirements for approval of our Capacity Assurance Plan. It is my understanding that the Western Governors' Association will be providing EPA this information, along with information from other states that are part of the Regional Agreement.

I would like to discuss activities we have initiated to encourage companies to reduce their generation of hazardous waste, and then discuss our plans for future activities concerning waste minimization.

### Current Activities

1. Through the Western Governors' Association's capacity assurance process we were able to obtain assistance from a contractor to conduct three waste minimization seminars in this State during August of 1990. These seminars targeted three types of generators that represent a majority of the hazardous waste generators in South Dakota. We accomplished two things: one, provided the industries with waste minimization technologies that are currently available to them; and two, provided a forum for industries with similar waste streams to discuss ways that they have found to minimize the volume and toxicity of wastes generated.

2. Technical assistance is provided during all hazardous waste inspections. Inspections are conducted of all treatment, storage and disposal facilities, all large quantity generators and at least thirty other small quantity generators each year. As part of these inspections, we discuss the

possibility of minimizing their wastes based on information we have obtained through literature, from EPA and through the experiences of other generators. Technical assistance in the form of daily telephone conversations, and training such as the Waste Oil Training Seminar conducted by this Department are a few more examples of technical assistance that we continue to provide.

3. We take advantage of opportunities to discuss our hazardous waste requirements and advantages of waste minimization at meetings throughout the state. A few examples of these meetings are the Petroleum Release Compensation Fund Contractors Conference, the Consultant Seminar sponsored by this Department, various Trade Associations conferences, the Municipal League's Annual Meeting, Pesticide Applicators Certification Seminars, etc.

4. Mailings to all facilities who have notified of a regulated activity also provides information on waste minimization. Publications such as the EPA publication entitled "Waste Minimization: Environmental Quality with Economic Benefits" has been distributed to all notifiers; additionally it is sent to any new notifier as part of an informational package.

#### Future Strategy for Waste Minimization

1. Continue to apply those techniques currently in use that have been described above.

2. Waste minimization will be used as a bargaining tool during our enforcement negotiations process. It is my understanding that training regarding incorporating waste minimization in enforcement actions will be provided by EPA in FY'91; we plan to attend this conference. We will also address waste minimization as a permit condition where applicable.

3. Forums such as the one conducted in August of 1990 will be conducted as time and resources allow. We had a positive experience during our recent Waste Minimization Seminars and hope to increase this kind of activity. There appears to be money available through the WGA Capacity Assurance regional process that will allow for this type of activity to take place this year. Additional money may also be available to fund this activity, through a Superfund CORE grant we are currently negotiating.

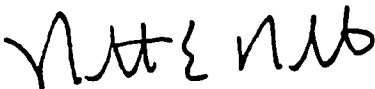
4. Trade Association publications and other Newsletters are also used to provide current information. We plan to

increase the use of this type of media to provide information on technologies that become available to us.

South Dakota's waste minimization program is and will continue to be a voluntary program. Our experience with generators located within this state has been that they are very cooperative and receptive to the idea of waste minimization or total elimination of hazardous waste generated for three reasons: 1. the reduction of waste means less money spent to dispose of the material; 2. most individuals that are responsible for compliance with hazardous waste regulations usually have a number of other responsibilities sometimes totally unrelated to environmental regulations. If they generate little or no more hazardous waste they become less regulated or not regulated at all; and 3. the term hazardous given to a chemical is sometimes enough deterrent that the generator prefers not to handle it for safety and health reasons. This cooperation and communication from generators is critical to a voluntary program's success.

If you have any questions or need further clarification on waste minimization efforts in South Dakota, please contact me at (605) 773-3153.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. E. Roberts', written in a cursive style.

Robert E. Roberts  
Secretary

cc. Tim Edman, Governor's Office of Operations  
Steven M. Pirner, Division of Environmental Regulation



**ATTACHMENT L**

**STATE OF UTAH**

January 1991

## **STRATEGY FOR WASTE MINIMIZATION PROGRAM DEVELOPMENT IN UTAH UTAH BUREAU OF SOLID AND HAZARDOUS WASTE**

### **CAPACITY ASSURANCE PLAN APPROVAL - SUPPLEMENTAL CONDITION**

#### **Background**

In October, 1989, Utah submitted its initial Hazardous Waste Capacity Assurance Plan (CAP) to the U.S. Environmental Protection Agency (EPA) in accordance with Section 104(c)(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Utah's CAP was subsequently approved by EPA Region VIII with certain supplemental conditions. One of the supplemental conditions requires the development of a state hazardous waste minimization strategy. This document serves to meet EPA's capacity assurance supplemental condition regarding hazardous waste minimization.

The role of waste minimization is becoming an increasingly important aspect of integrated hazardous waste management. Various national laws and policies recognize that waste minimization must be the first step in any sound, long-term plan for managing hazardous waste. In the Hazardous and Solid Waste Amendments of 1984 (HSWA), Congress declared it to be "the national policy of the United States that, whenever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible" (§ 1003(b), RCRA). In addition, Congress recently passed new pollution prevention legislation which declares that "source reduction is fundamentally different and more desirable than waste management and pollution control." (Pollution Prevention Act of 1990)

Utah concurs in the basic need for establishing this national policy direction for reducing the amount of waste generated and managed in this country. Consequently, in developing this strategy it is recognized that waste minimization has been both broadly and narrowly defined and applied throughout the states. This is largely due to the varying needs, perceptions, and technologies which currently affect public and private waste minimization efforts. This is important to note because the objective of this initial strategy is not to provide a single, limiting definition of waste minimization which restricts its application among hazardous waste generators and facilities in Utah, but is designed to establish a firm direction for the Utah Bureau of Solid and Hazardous Waste in its efforts to further waste minimization activities throughout the state.

#### **Waste Minimization as Part of the Capacity Assurance Process**

While not explicitly addressed in Section 104(c)(9) of CERCLA, EPA has identified, from the outset of the capacity assurance process, waste minimization as having a key role. In accordance

with EPA's 1988 capacity assurance guidance, states were to describe current and future waste minimization programs and activities in the CAPs.

Chapter IV of Utah's CAP provided a comprehensive description of the role of waste minimization in the capacity assurance process for Utah. In that chapter, it was noted that Utah had officially applied for a pollution prevention grant from EPA under the Pollution Prevention Incentives for States (PPIS) program. Since the submittal of the CAP, Utah has received notification from EPA Headquarters that it was not successful in obtaining a PPIS grant. Therefore, an integral part of this strategy is to reaffirm Utah's commitment to apply for future pollution prevention grants to the extent that such grants are available. The potential for establishing a formal state waste minimization program in Utah is minimal without adequate federal funding support. However, this candid assessment does not ignore the Bureau's willingness to explore and capability to continue developing less formal means of state waste minimization activities. The following paragraphs describe past and current activities by the Bureau which demonstrate our commitment and willingness to pursue this informal process.

Since August, 1988, Utah has participated with other western states under the auspices of the Western Governors' Association (WGA) in a multi-phase capacity assurance project. This regional effort was established under the direction of the governors to provide assistance to the participating states in meeting their capacity assurance planning requirements.

For Utah, Phase I tasks of the WGA project were focused on preparing and submitting the 1989 CAP. A section of the CAP presented a brief analysis of the waste minimization information reported by Utah generators and facilities in the 1987 Biennial Reports. Under Phase II, a study was performed to 1) identify selected industry groups that generate large quantities of hazardous waste and analyze the potential for waste minimization activities, and 2) produce a report with detailed information on specific waste minimization program development options for Utah. This report was recently completed by the contractor to the WGA capacity assurance project. It addresses waste minimization program development options and serves as a comprehensive "users guide" for state program staff involved with the design and implementation of new waste minimization program initiatives.

Phase III will be implemented upon approval by WGA and EPA and will be directed entirely to waste minimization activities. Specifically, this phase is designed to conduct the following four tasks, of which the first two enhance the information already obtained from the first part of Phase II.

1. The primary industries upon which a waste minimization needs assessment will focus will be selected.
2. For the selected industries, investigate, through literature reviews and direct contacts with industry officials, the overall potential for waste minimization.

3. Organize meetings between the state and officials from the selected industries to assess the level of awareness about and adoption of waste minimization activities. This task is also designed to collect ideas from these officials of how the state can facilitate the adoption of waste minimization practices in the industry.
4. A final report will be prepared to summarize the data collected from the above tasks and provide recommendations for specific waste minimization program activities.

### Approach for Implementation

Although Utah does not currently have an organized state waste minimization program, all levels of generators are openly encouraged by the Bureau to develop and implement waste minimization practices. The Utah Solid and Hazardous Waste Act provides for broad legislative authority to establish a state waste minimization program by "preventing the unnecessary waste and depletion of natural resources." (§ 26-14-5(h), Utah Code Annotated 1953, as amended) This section presents those waste minimization activities which the Bureau has identified as appropriate within the context of existing authorities, including applicable authorities under state RCRA primacy, and available resources.

#### 1. POLLUTION PREVENTION GRANTS

Upon receiving notice of availability for federal pollution prevention grants, Utah will prepare and submit a grant application for supporting state waste minimization program activities such as technical assistance, educational seminars, and information exchanges.

#### 2. BIENNIAL REPORTS

For each hazardous waste reporting biennium, an evaluation of the waste minimization information reported by hazardous waste generators and facilities will be made. This information will be collated and summarized separately to monitor waste minimization progress.

#### 3. HAZARDOUS WASTE PERMITTING

Require Bureau staff permit writers to participate in the Permit Writers Training Course now under development by a contractor to EPA Region VIII. This training course will be held in each of the Region VIII states and is intended to instruct state environmental permit writers of ways to include pollution prevention (waste minimization) provisions into state permits. Staff permit writers from the other bureaus within the Division of Environmental Health will also be encouraged to attend the course to be held for Utah.

For new applications received by the Bureau, final RCRA operating permits (defined as "plan approvals" under the Utah Solid and Hazardous Waste Act), closure plan approvals, and post-closure permits for which Utah is authorized to issue, will include appropriate waste minimization provisions.

#### 4. HAZARDOUS WASTE COMPLIANCE/ENFORCEMENT

As on-site inspections are conducted of hazardous waste generators and facilities, compliance with applicable state waste minimization certification requirements of the biennial reports (R450-5-5, R450-7-12.6, R450-8-5.6, Utah Administrative Code, equivalent to 40 CFR, 262.41, 265.75, and 264.75, respectively) will be evaluated and, as appropriate, will be included in any enforcement documents issued.

As part of the Bureau's routine pre-inspection procedures, state hazardous waste inspectors will be encouraged to ask the generators and facilities, at the time of the inspection, about existing waste minimization practices and efforts. In the long term, the Bureau will develop an approach to train inspectors in providing on-site technical assistance by identifying waste minimization opportunities and distributing "self-audit" checklists and relevant waste minimization literature.

The Bureau will explore the opportunity and potential for incorporating waste minimization provisions in RCRA corrective action remediations, enforcement orders, and negotiated consent agreements, where legally allowed.

#### 5. STATE/EPA AGREEMENT

Beginning with the State/EPA Agreement (SEA) for FY 1992, the Bureau will seek to include waste minimization activities in the annual workplan negotiated with EPA Region VIII. The realization of this strategy is dependent on the availability staff resources and the level of effort necessary for meeting other program commitments with a higher priority for accomplishment.

#### Strategy Implementation Assessment

A semiannual assessment of the level of implementation and effectiveness of this strategy will be made. Revisions and updates to this strategy will be made as determined by the assessments to be necessary.

**ATTACHMENT M**

**STATE OF WYOMING**

THE STATE



OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756  
FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781  
FAX (307) 777-5973

January 22, 1991

Mr. Ron Ross  
Western Governor's Association  
600 17th Street  
Suite 1705 South Tower  
Denver, Colorado 80202-5442

Dear Ron:

Enclosed is the summary for Wyoming's waste minimization programs and activities for the January 1991 Capacity Assurance Update.

Please feel free to contact me at (307) 777-7752 if you have any questions about this summary.

I look forward to seeing you at the March meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Pat".

Patricia E. Gallagher  
Region I Environmental Analyst

C: David A. Finley, SWM/Cheyenne  
Carl Anderson, SWM/Cheyenne

## Waste Minimization Strategy - 1991 CAP Submittal

The State of Wyoming is developing a waste reduction program with the cooperation of a voluntary waste minimization work committee comprised of representatives from the State's large quantity hazardous waste generators. The committee will evaluate various waste minimization technologies and identify new or potential areas of waste reduction. Technologies that are judged appropriate will be incorporated by participating generators. Information developed by the committee will be distributed to all of the state's large quantity generators. A training session is planned to educate small-quantity generators on waste minimization techniques. The waste minimization effort is being supported in part through a "Pollution Prevention Grant" funded by the Environmental Protection Agency.

The State of Wyoming is not RCRA-authorized. The State of Wyoming will incorporate waste reduction requirements in RCRA permit applications, provide technical assistance and guidance as part of inspections, and will include waste minimization strategies in enforcement actions within 180 days after becoming RCRA-authorized.

The primary barriers to implementing a waste minimization program are the lack of funding and lack of regulatory authority..