



**DIRECTIVE NUMBER:** 9523.00-18

**TITLE:** Summary of Assistance Branch  
Permitting Comments

**APPROVAL DATE:** 3/14/89

**EFFECTIVE DATE:** 3/14/89

**ORIGINATING OFFICE:** Office of Solid Waste

☒ **FINAL**

☐ **DRAFT**

**STATUS:** ☐ A- Pending OMB approval  
☐ B- Pending AA-OSWER approval  
☐ C- For review &/or comment  
☐ D- In development or circulating  
headquarters

**REFERENCE (other documents):**

OSWER Directive #9523.00-12

OSWER Directive #9523.00-14

OSWER Directive #9523.00-17

OSWER Directive #9523.00-15

OSWER OSWER OSWER  
E DIRECTIVE DIRECTIVE D

<b>United States Environmental Protection Agency</b> Washington, DC 20460		1 Directive Number 9523.00-18
OSWER Directive Initiation Request		
2. Originator Information		
Name of Contact Person James F. Michael	Mail Code OS-343	Office OSW
		Telephone Code (202) 382-2231
3. Title <p style="text-align: center;">Summary of Assistance Branch Permitting Comments</p>		
4. Summary of Directive (include brief statement of purpose) This is the fifth in a series of periodic reports which summarize issues that HQ staff have addressed in their reviews of RCRA Part B permit applications, permits, and closure plans. This report covers issues that are of national interest from reviews conducted by the Assistance Branch during April and May 1988. This report provides current EPA policy and guidance to the Regions and States.		
5. Keywords Land Disposal Facility / Corrective Action / Permit / Closure / Treatment / Storage / Incineration /		
6a Does This Directive Supersede Previous Directive(s)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes What directive (number, title)		
b Does It Supplement Previous Directive(s)? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes What directive (number, title)		
9523.00-12 / 9523.00-14 / 9523.00-15 / 9523.00-17		
7 Draft Level <input type="checkbox"/> A - Signed by AA/DAA <input type="checkbox"/> B - Signed by Office Director <input type="checkbox"/> C - For Review & Comment <input type="checkbox"/> D - In Development		

8. Document to be distributed to States by Headquarters? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--

This Request Meets OSWER Directives System Format Standards	
9 Signature of Lead Office Directives Coordinator <div style="text-align: center;"> </div> Jennifer A. Barker, Office of Solid Waste	Date 10/19/88
10 Name and Title of Approving Official Sylvia K. Lowrance, Director, Office of Solid Waste	Date 3/14/89

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete

OSWER	OSWER	OSWER	O
VE	DIRECTIVE	DIRECTIVE	DIRECTIVE

39198630

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAR 14 1989

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSEMEMORANDUM

SUBJECT: Summary of Assistance Branch Permitting Comments

FROM: Sylvia K. Lowrance, Director  
Office of Solid Waste (OS-300)TO: Regional Waste Management Division Directors  
Regions I-X

Attached is the fifth in a series of periodic reports which summarize major issues that Assistance Branch staff have addressed in their reviews of specific Part B applications, permits, closure plans and in their responses to site-specific situations<sup>1</sup>. These reports cover issues that are of generic national interest rather than strictly site-specific interest. The attached report includes reviews conducted by the Disposal and Remediation Section and the Alternative Technology and Support Section during April and May, 1988. To ensure that the report reflects current EPA policy and guidance, we obtained review comments and concurrences from within OSW, from the Office of Waste Programs Enforcement, and from the Office of General Counsel.

We hope that the recommendations provided in this document will be helpful for permit writers encountering similar situations at other RCRA facilities. By sharing the Assistance Branch's suggestions from a few sites, we hope that permit decision-making will be somewhat easier and faster at many more sites nationally. We encourage you to distribute this report to your staff and State permit writers. To make the distribution easier, I have attached multiple copies of the report.

---

<sup>1</sup> (These reports were formerly entitled "PAT Summary Reports": previous reports were issued on March 14, 1986 (OSWER Policy Directive No. 9523.00-14), March 30, 1987 (OSWER Policy Directive No. 9523.00-12), March 30, 1988 (OSWER Policy Directive No. 9523.00-15), and September 2, 1988 (OSWER Policy Directive No. 9523.00-17)

-2-

Attachment A to the report lists the facility names, Regions, review coordinators, and dates for the reviews summarized in this report. Attachment B provides a list of guidance documents and directives used in preparing the reviews.

If you have any questions, comments, or suggestions on the Summary of Assistance Branch Permitting Comments, please contact Jim Michael, Chief, Disposal and Remediation Section, OSW at FTS 382-2231.

#### Attachments

cc: RCRA Branch Chiefs	DRS Staff
Regions I-X	ATSS Staff
Permit Section Chiefs	Art Day
Regions I-X	Les Otte
Jon Cannon	Ken Skahn
Jeff Denit	Susan Bromm
Jim O'Leary	Steve Heare
Joe Carra	Scott Parrish
Matt Hale	Lisa Friedman
Ken Schuster	Tina Kaneen
Suzanne Rudzinski	Fred Chanania
Elizabeth Cotsworth	Bob Dellinger
Alex Wolfe	Tom Kennedy (ASTSWMO)
Jim Michael	

Summary of Assistance Branch Permitting CommentsTable of Contents

<u>Topic</u>	<u>Page</u>
Issue Resolution	1
Popping Furnaces	1
Subpart X - Miscellaneous Units	2
Closure	5
RCRA Corrective Action	7
Recommendations	10
Popping Furnaces	10
Liner Requirements	11
Hazardous Waste Stabilization	13
Permit Issuance	13
Staff Reviews Included in This Summary	Attachment A
List of Guidances Used in This Summary	Attachment B

**SUMMARY OF ASSISTANCE BRANCH PERMITTING COMMENTS****April 1988 - May 1988**

This report is the fifth in a series of documents summarizing some of the comments provided to Regional permit writers by OSW's Assistance Branch. The report is organized into two sections. The first section, Issue Resolution, provides examples of issues that have been raised at one or more facilities. This section covers special situations where regulations or policy decisions were applied in actual circumstances. The second section, Recommendations, addresses comments routinely made to answer questions on items often overlooked or poorly understood, and to convey technical information. This section should be generally helpful to the permit writer. A contact person has been listed for each item to answer additional questions.

**ISSUE RESOLUTION****Popping Furnaces****1) Automatic Waste Feed Shut-off**

The Army is in the process of applying for permits for their munitions deactivation (popping) furnaces that are located at about a dozen Army facilities around the nation. These "popping furnaces" are hazardous incinerators where the waste material is obsolete munitions that must be exploded in the incineration chamber during the incineration process. The explosive nature of the waste poses specific problems unique to these units in meeting Subpart O requirements.

Section 264.345(e) requires that "an incinerator must be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits . . .". Explosive wastes in the "hot zone" near the furnace cannot be safely stopped before the incinerator chamber due to risk of explosion outside the unit. A design was proposed at an Army facility that meets the requirement for an automatic waste feed cut-off without compromising safety. The proposed design consists of two conveyors. The first conveyor feeds waste munitions onto a second conveyor which, in turn, feeds the munitions in the "hot zone" into the feed chute. The automatic control would stop the first system in the event of deviations from permit operating conditions, while the waste in the "hot zone" would continue safely into the unit.

-2-

The Assistance Branch reviewed the proposed waste feed system and concurs that this system meets the regulatory requirements under Section 264.345(e) for an automatic waste feed cut-off.

Contact: Sonya Stelmack 202 or FTS-382-4500

## 2) Fugitive Emissions

Fugitive emissions are characteristic of popping furnaces during the explosion of the munitions waste in the incinerator chamber. Section 264.345(d) requires that fugitive emissions from the combustion zone be controlled by keeping the combustion zone totally sealed; or by maintaining a combustion zone pressure lower than atmospheric pressure; or by an alternate method which can be demonstrated to provide fugitive emissions control equivalent to the maintenance of combustion zone pressure lower than atmospheric.

An Army facility proposed to maintain lower than atmospheric pressure in their combustion zone; however, they could not do so continuously. They requested that the permit be worded so that a specific number of positive pressure excursions would be allowed. The Assistance Branch concluded that allowing positive pressure excursions would not meet the regulatory requirement for fugitive emission control. The Assistance Branch informed the Army that their other proposed option of providing a totally enclosed system where the collected fugitive emissions would then be returned to the incinerator with the air intake would be acceptable. A more recent Army proposal to enclose the furnace retort in a negative-pressure shroud rather than totally enclosing the system will also be considered, provided the Army submits adequate supporting data.

Contact: Sonya Stelmack 202 or FTS-382-4500

## Subpart X - Miscellaneous Units

### 1) Units Regulated under Subpart X

A facility has ten units that the owner/operator maintains are miscellaneous units which should be regulated under Subpart X. The owner/operator describes these units as pits. Wastewater containing reactive waste enters the unlined pits. The liquid is first allowed to evaporate or percolate out of the units. The owner/operator then ignites the remaining residue after the liquid is removed.

-3-

The Region contends that these units are surface impoundments and should be regulated under Subpart K. The Assistance Branch was asked to evaluate the nature of these units and identify the applicable regulations.

Surface impoundments may be used to store, dispose or treat hazardous waste. The process occurring in these units is the treatment of wastewater (which does not have the potential to detonate) by dewatering with the subsequent open burning of the residue. Additionally, Section 260.10 specifically includes pits as an example of surface impoundments. Therefore, all requirements applicable to surface impoundments, including land disposal restrictions, November 8, 1988 retrofit deadlines, and minimum technology requirements, apply to these units. Subpart X is intended to cover units not regulated elsewhere and will not replace or supercede any restrictions or requirements contained in another Subpart. Units that are containers, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, boilers, industrial furnaces and injection wells are specifically excluded from Subpart X.

If the Regional Administrator feels that the Subpart K standards do not provide adequate protection during the burning phase of the treatment process, additional permit conditions may be based upon the HSWA omnibus provisions in Section 3005(c) in order to protect soil and air.

Contact: Chet Oszman 202 or FTS-382-4499

## 2) Open Burning/Open Detonation (OB/OD) Unit Requirements

Non-military waste explosives can be open burned/open detonated if the waste has the potential to detonate as stated in Section 265.382. If the waste explosives, including wastes consisting of part solvent, do not have the potential to detonate, the waste cannot be destroyed in OB/OD units. Solvents contaminated with explosives to the extent that they have the potential to detonate may be open burned provided that the unit qualifies under either 264, Subpart X or 265, Subpart Q. The open burning and detonation of waste explosives is considered to be a treatment process rather than waste disposal, and therefore the land disposal deadlines and restrictions do not apply. Treatment residues, however, may be subject to such restrictions.

Contact: Chet Oszman 202 or FTS-382-4499



-4-

### 3) Permit Requirements for Waste Explosives

The Assistance Branch was asked to clarify the circumstances under which the disposal of explosives would require a permit and to define the point at which unused explosives become a waste.

A Subpart X permit or interim status is necessary for the non-emergency open burning/open detonation of waste explosives. The immediate response provisions of Sections 264.1(g)(8), 265.1(c)(11), and 270.1(c)(3) allow an exception to the permit requirement to be made in situations where the threat of explosion (i.e., the discharge or threat of discharge of a hazardous waste) presents an emergency situation. If immediate action is not required, but the threat to human health and the environment persists, the Director may issue an emergency permit under Section 270.61(a), bring an imminent hazard action under RCRA Section 7003, or perform a removal action pursuant to CERCLA Section 104.

When explosives are fulfilling their normal use pattern and there is no intent to discard them, they are not hazardous waste nor are they subject to Subpart X. However, damaged or leaking explosives or other undetonated explosives that, for safety reasons, cannot be used (such as expired shelf life) are waste, and can be hazardous waste.

Contact: Chet Oszman 202 or FTS-382-4499

### 4) Applicability of Subpart X Permits to Fire Training Exercises

Fire fighters routinely train by extinguishing blazes set as part of a training exercise. Often various types of fuel are used to ignite the training structure. The Assistance Branch was asked to determine if these exercises and training areas require Subpart X permits.

The burning of commercial fuel in fire training exercises is within the normal use of that fuel product. However, verification must first be made to establish that the material to be burned is actually commercial fuel. Once the material is verified as commercial fuel, burning in fire fighter training exercises does not constitute a RCRA regulated activity. If the material to be burned is not a commercial fuel but any other ignitable hazardous waste such as used oil or spent solvents, this type of open burning is prohibited.

-5-

Even when commercial fuels are used, there is the potential for ignitables or hazardous constituents to be released to the surrounding soil and surface water. The individuals responsible for conducting the exercise should be advised to prevent any such releases. In situations where releases do occur and these releases may pose a threat to human health or to the environment, a variety of Federal and/or State enforcement/cleanup authorities may be called upon.

Contact: Chet Oszman 202 or FTS-382-4499

### Closure

#### 1) Use of Soil Background Levels for Clean Closure

Several Regions requested clarification on setting soil cleanup levels at facilities that plan to achieve clean closure. As stated in the preamble to the March 19, 1987 final regulations, verified reference doses (RfDs) and Carcinogenic Potency Factors (now correctly called Carcinogenic Slope Factors, or CSF) can be used to determine cleanup levels for contaminants when they are available. In cases where no Agency-recommended levels exist, the soil cleanup level may be based on either background levels or data developed by the owner/operator to support a health-based limit.

Background levels can be determined in two ways. Soil samples can be taken from uncontaminated areas of the facility and at representative depths. The background samples must be taken in areas that are not contaminated from spills or by the operation of the waste management unit or in some cases, by the operation of any manufacturing processes that may be present. The second approach uses published literature as the source of naturally-occurring levels in similar soils to establish background levels.

At one facility the chemicals of concern were lead and cadmium. At that time, the Office of Research and Development (ORD) was evaluating data on the toxicity of both of these substances. While the toxicological information for lead and cadmium was undergoing current review, the RfD for cadmium (0.0005 mg/kg/day) was likely to be approved and could be used to set a soil cleanup level. After applying the appropriate exposure assumptions, the RfD translated into a cleanup level of 9 mg/kg of cadmium. The cadmium level proposed by the owner/operator for the closure of their land disposal unit was acceptable as it was based on the proposed RfD. (The RfD of 0.0005 mg/kg/day was approved on May 25, 1988.)

-6-

The RfD for lead is undergoing revision as a result of new information on the neuro-behavioral effects of lead. The RfD workgroup is not expected to reach a decision on the new level in the near future. Lead is also undergoing evaluation to determine if it acts as a potential carcinogen via oral exposure. The determination of a CSF is expected to take a while; therefore, soil cleanup levels for lead should be based on background levels.

Contact: Chris Rhyne 202 or ETS-382-4695

## 2) Redesignating Unit Type during Interim Status

An owner/operator wishes to redesignate a unit that has been operating as an interim status surface impoundment as a landfill. The owners propose to stabilize the waste, retain the stabilized waste, redesignate the unit as a landfill and continue operations. The bottom liner system of the unit does not meet the minimum technology requirements. As a surface impoundment, the owners must either retrofit or stop receiving wastes by November 8, 1988. If the unit stops receiving waste, it must close in order to comply with Section 3005(j) requirements.

Under Section 270.72(c), changes in process can be made during interim status only under the following two circumstances:

- (1) It is necessary to prevent a threat to human health or the environment because of an emergency situation, or;
- (2) It is necessary to comply with Federal regulations or State or local laws.

The Region concluded that neither criterion could be satisfied for this facility.

In this particular situation, however, the authorized State regulations which are analogous to Section 270.72(c) also allow for a change if "proposed changes are demonstrated to result in safer or environmentally more acceptable processes." In order to comply with the State condition, the owner would have to demonstrate that a landfill operating with less than a minimum technology liner is safer or environmentally more acceptable than a closed or retrofitted surface impoundment. The Assistance Branch did not believe that such a demonstration is possible and that the facility could not, therefore, meet the State requirement. The State, however, ultimately would be

-7-

responsible for determining if the demonstration satisfies the condition for a more acceptable process. Note that if the unit conversion were allowed to take place, the unit would be an existing landfill unit, and not a new unit subject to MTRs.

Contact: Dave Eberly 202 or FTS-382-4691

#### RCRA Corrective Action

In order to set cleanup standards at a facility undertaking corrective action to remediate releases from their solid waste management units, a Region asked the Assistance Branch to clarify the Agency policy on determining cleanup levels, compliance points, timing of corrective action and the use of institutional controls.

##### 1) Cleanup Standards

Promulgated standards should be used as cleanup standards when they are available. Maximum contaminant levels (MCLs), established under the Safe Drinking Water Act (SDWA), are available for some contaminants and should be used for a cleanup standard for ground water that is or potentially can be a source of drinking water. When promulgated standards are not available, Agency health-effects data should be used to derive the cleanup level.

EPA's Integrated Risk Information System (IRIS) provides current Agency health assessments and regulatory decisions on many chemicals. When setting cleanup levels for carcinogens based upon the Carcinogen Slope Factor (CSF), the risk range should fall between  $1 \times 10^{-4}$  and  $1 \times 10^{-7}$ .

Standard exposure assumptions for drinking water should be used for setting cleanup levels based upon verified reference doses (RfDs) and CSFs in ground water used, or potentially used, for drinking. Cleanup levels in soil should be based upon exposure assumptions corresponding to the potential land use. For example, if children can play in the area after cleanup and the soil contamination is surficial, the potential for children to ingest soil must be considered. Guidance on specific exposure assumptions and exposure scenarios is currently being developed.

Contact: Reid Rosnick 202 or FTS-382-4755

-8-

## 2) Compliance Points for Soil and Ground Water Cleanup

The objective of corrective action to ground water is to restore beneficial use if possible. In cases where ground water is or has the potential to be used for drinking, cleanup should be throughout the plume. However, there are circumstances, such as when the waste is left in place or the unit is still operating, that preclude cleanup throughout the whole plume. In such situations, the compliance point is at the edge of the waste management unit.

The compliance point for soils is any area that may be available for direct contact with the soils. In cases where subsurface soils are contaminated to the extent that ground water contamination is or has the potential to occur, soil cleanup levels should be set to protect the ground water.

Contact: Reid Rosnick 202 or FTS-382-4755

## 3) Timing of Cleanup Activities and Monitoring of the Site

At this time, the proposed corrective action regulations will not establish a time frame for attaining cleanup levels. A number of factors should be evaluated prior to setting a schedule for a particular facility. These factors are: (1) the extent and nature of contamination; (2) the practical capability of the remedial technology to meet the objectives; (3) the availability of treatment or disposal capacity for wastes; (4) the use of emerging technologies; and, (5) potential risk to human health and the environment from exposure prior to the attainment of cleanup levels. In general, expeditious cleanup, particularly of off-site contamination, is the goal.

With respect to ground water corrective action under Subpart F (Section 264.100), the owner/operator is required to monitor ground water during the compliance period (resume compliance monitoring) after cleanup activities have ended to demonstrate that the ground-water protection standard is being achieved. If corrective action is ongoing at the end of the compliance period, corrective action cannot be terminated until the ground water protection standard is not being exceeded for three consecutive years. While this time frame has been applied to corrective action from SWMUs, it is often difficult to demonstrate reliably that the standard has been achieved for three years in all hydrogeological settings.

-9-

The Agency is proposing Section 3004(u) corrective action regulations that determine the timing for demonstrating compliance based on a case-by-case basis. When selecting the length of time appropriate to determine compliance, the Region should consider the following: (1) the extent and concentration of the release; (2) the behavior of the hazardous constituents in the affected medium; (3) the accuracy of monitoring techniques; (4) the characteristics of the contaminated media; and, (5) any environmental, seasonal or other pertinent factors.

Contact: Reid Rosnick 202 or FTS-382-4755

4) Use of Institutional Controls in the RCRA Program

Institutional controls may be used to limit exposure during cleanup; however, they should not be viewed as a substitute for cleanup. In some cases, the presence of institutional controls may allow final cleanup to be deferred if the owner/operator can assure that there is no potential for exposure. Institutional controls may also be used in situations where technical limitations prevent compliance with cleanup standards.

Institutional controls may be engineered features that prevent exposure such as fences or barriers. They may also be non-engineered controls that prohibit access to ground water or limit use, such as deed restrictions.

Contact: Reid Rosnick 202 or FTS-382-4755

-10-

## RECOMMENDATIONS

Popping Furnaces

## 1) Conducting Trial Burns Prior to the HSWA Deadline for Permitting Interim Status Incinerators

Because it usually takes one year to issue a permit after a trial burn, interim status facilities should schedule the trial burn prior to November 1988 in order to meet the November 8, 1989 deadline for permitting interim status hazardous waste incinerators. The Army has proposed that the data collected from the trial burns conducted at one facility be applied to other popping furnaces. The only circumstances where an owner/operator can use data from one incinerator in lieu of conducting a trial burn at another is when the two units are similar in all significant respects including unit type, combustion chamber size, dimensions of major components and operating conditions. In addition, the wastes burned in the other units must be adequately represented by the wastes burned during the trial burn. This means that the types and concentrations of organic hazardous constituents and metals must be similar. The incinerability, form, and ash content of the waste must also be comparable.

The Assistance Branch feels that the use of data from a trial burn at one facility in lieu of trial burns at the other facilities will not be acceptable for all Army popping furnaces because the units were built by different manufacturers, are of different ages, have worn differently over the years, and have had different modifications made to them.

An alternate proposal by the Army is to conduct "base" trial burns at each facility using the wastes that the facility will most often burn after permitted. A "large scale" trial burn would also be conducted with a broad range of wastes at one facility to represent the worst-case waste to be burned in any of the units.

The Assistance Branch and the Incinerator Permit Writer's Workgroup agreed that this type of approach could be acceptable for setting a more flexible range of permit conditions for the popping furnaces provided that the "large scale" trial burn is conducted at 3 or

-11-

4 facilities. Furthermore, the results from each facility that conducted a "large scale" trial burn must be consistent to allow the data to be used in lieu of large scale trial burns at all popping furnaces. If the results are not consistent, permit conditions must be based on the individual facility trial burns.

Contact: Sonya Stelmack 202 or FTS-382-4500

## 2) Evaluation of Part B Applications for Popping Furnaces

The adequate evaluation of a trial burn plan for a "popping furnace" involves additional criteria beyond that required for the evaluation of most incinerators since the explosive nature of the waste will affect the combustion process and ash carryover. For example, in typical hazardous waste incinerators, the ash content of the waste is the major variable along with the efficiency of the air pollution control equipment that affects the release of particulate matter from the stack. In the case of popping furnaces, the explosive content of the waste must also be evaluated because of the potential effect on particulate formation and entrainment. For popping furnaces it is possible that there are several "worst-cases" that must be evaluated during a trial burn. The waste burned in the trial burn should be selected for the "worst-case" with respect to incinerability of Appendix VIII compounds, particulate and metals emissions.

The Assistance Branch has also been encouraging that metal limits be set to adequately protect human health and the environment under the authority of the omnibus provision (Section 3005(c)(3)).

Contact: Sonya Stelmack 202 or FTS-382-4500

## Liner Requirements

### 1) Use of In-place Hydraulic Conductivity Testing during Liner Installation

The requirement to perform in-place hydraulic conductivity testing on the soil liner of a test fill was a condition of the final permit for one facility. The owner/operator of the unit objected to the requirement and requested clarification of current EPA policy on the use of in-place versus laboratory hydraulic conductivity testing.



-12-

The current EPA policy was adopted in May 1985 in the "Draft Minimum Technology Guidance on Double Liner Systems for Landfills and Surface Impoundments -- Design, Construction, and Operation" (see Reference 3, Attachment B). The Agency maintains that in-place hydraulic conductivity testing is "the most accurate means of consistently determining the actual hydraulic conductivity of a constructed soil liner." The guidance recommends that the in-place hydraulic conductivity test be performed on a test fill using the same equipment and techniques that will be used during the construction of the actual liner.

EPA policy was reinforced by OSWER Policy Directive #9472.003 (See Reference 5, Attachment B), which was issued in October 1986. This document presents further support to the Agency's position that in-place testing is superior to laboratory testing. This does not mean that laboratory testing is not a significant component of a construction quality control program. Research, however, has shown that laboratory permeability tests often produce results that are one to three orders of magnitude lower than the actual hydraulic conductivity present in the field. A satisfactory in-place hydraulic conductivity test does not have to determine the specific hydraulic conductivity but must document that it is less than  $1 \times 10^{-7}$  cm/sec.

An unofficial survey found that the majority of Regions consistently implement the policy requiring in-place hydraulic conductivity testing.

Contact: Chris Rhyne 202 or FTS-382-4695

## 2) Freeze-Thaw Concerns with Clay Layer in Final Cover

A facility located in a northern state proposed to install the clay liner portion of the final cover on their landfill only 24 inches below the surface. In this section of the country, frost penetration was 36 inches.

The Assistance Branch was asked to evaluate the proposed design. Based on EPA guidance (See Reference 3, Attachment B), we recommended that the clay layer below the flexible membrane layer (FML) be completely below the average frost depth. It is permissible to allow for snow cover in the frost depth calculations. At this

-13-

location, 6 inches of snow cover is typical; therefore, we recommended that the soil layer above the clay liner need be increased by only 6 inches instead of one foot.

Contact: Chris Rhyne 202 or FTS-382-4695

#### Hazardous Waste Stabilization

##### 1) Use of Natural Material in a Waste Stabilization Process

A facility that planned to close its interim status surface impoundment needed to develop a site-specific process that would sufficiently stabilize its highly organic and oily waste material. The facility engineers proposed to use cement kiln dust as the pozzolanic component in the process. They also proposed to use caliche, a locally occurring form of calcium carbonate, as an absorbent in the process.

In order to demonstrate that stabilization has occurred, the waste must be shown to have undergone chemical change. The engineers conducted a series of laboratory and field tests with various proportions of the chemical additives. They monitored soluble organic carbon (SOC) levels in the leachate. Based upon data showing that lower SOC levels were found in the leachate of stabilization mixtures containing caliche as well as the cement kiln dust, the engineers demonstrated that caliche was a necessary component in the stabilization process. Considering these results and the increased strength of this stabilized material over time, the Assistance Branch concluded that stabilization was occurring.

Contact: Dave Eberly 202 or FTS-382-4691

#### Permit Issuance

##### 1) HSWA Permit Preparation

A Region prepared a draft HSWA permit for a facility by using the RCRA Corrective Action Plan (CAP) (See Reference 4, Attachment B) as a guide. The Region asked the Assistance Branch to comment on this approach and the permit language.

-14-

While the Assistance Branch agreed that the CAP was the best currently available guide for Regions to use to prepare HSWA permits, the CAP is more in the nature of a checklist, from which specific permit conditions can be developed. Incorporation of general CAP requirements directly into a permit is likely not to be specific enough. (Please note that the Module for Corrective Action for Solid Waste Management Units of the Model Permit, distributed for review and use on November 30, 1988, is also an appropriate guide for using Sections 3004(u) and (v).)

Further, there are several points that the permit writer must keep in mind when applying this reference. First, the CAP was designed to cover all possible corrective action requirements, including interim status corrective action orders under Section 3008(h) as well as permit requirements under Section 3004(u). The permit writer must select the applicable Section 3004(u) requirements from the "menu" of requirements presented in the CAP. Certain CAP requirements related to Section 3008(h) are not appropriate for permits.

Second, the permit writer must, for any individual facility, identify the information already available in the Part B application and collected during the RCRA Facility Assessment (RFA). It is not necessary to require information that has already been provided elsewhere. Based upon this information, facility-specific permit conditions can be developed using the CAP as a checklist, but not as a model for the actual permit condition language.

Contact: Dave Eberly 202 or FTS-382-4691

2) Authority to Implement Subpart X Standards in RCRA Authorized States

The Agency is using the authority under Section 264.1(f)(2) to implement the regulations for miscellaneous units in all States at the same time, regardless of their authorization status. This authority exists independent of HSWA. Section 264.1(f)(2) applies specifically to the regulation of units not covered by any Federal permit requirements at the time that an individual state program was authorized. This authority was created to avoid the situation that no permits (such as Subpart X permits) could be issued in an authorized state for several years after permit standards were promulgated by the Agency (i.e., until the state receives Subpart X authorization). Therefore, Subpart X requirements will be implemented by EPA in all

-15-

states at the same time. See OSWER Policy Directive #9489.00-2 (See Reference 1, Attachment B) for further clarification.

Contact: Chet Oszman 202 or FTS-382-4499

### 3) Permitting Deadlines for Subpart X Facilities

The permit application deadline of November 8, 1988 and the permit issuance deadline of November 8, 1992 promulgated in Section 3005(c) of HSWA, are relevant to Subpart X facilities that had interim status as of November 8, 1984. The permit applications due in 1988 need only address those units which were listed (or should have been listed) in a facility's Part A application as of November 1984. Any permit issuance made in 1992 need address only those units subject to the 1988 application deadline (although it can address other units as a discretionary matter). This may mean that permit issuances in 1992 will be partial permits since only units with interim status before November 8, 1984 must be addressed. Regions are encouraged to notify interim status facilities in order to give them the opportunity to meet the November 1988 deadline.

Contact: Chet Oszman 202 or FTS-382-4499

## Attachment A

## Assistance Branch reviews included in this summary

<u>Facility Name</u>	<u>Region</u>	<u>Coordinator</u>	<u>Review Date</u>
Burnham Corporation Foundry	V	Mark Salee	May 1988
CSSI	X	Chris Rhyne	May 1988
Hawthorne Army Ammunition Plant	IX	Sonya Stelmack	May 1988
IBM	I	Amy Mills	April 1988
Morton Thiokol	VIII	Chet Oszman	May 1988
SCA (Model City)	II	Chris Rhyne	April 1988
R&D Fabricating	VI	Chet Oszman	May 1988
Sinclair Oil	VI	Dave Eberly	April 1988
Tooele Army Depot	VIII	Sonya Stelmack Jim Michael	April 1988 May 1988
Umatilla Army Depot	X	Sonya Stelmack	April 1988
Union Carbide (Ponce, P.R.)	II	Dave Eberly	April 1988
Union Carbide (Sisterville, WVA)	III	Dave Eberly	May 1988

**Attachment B**

**List of Guidance Documents used in Preparing the Assistance  
Branch Permitting Comments**

1. "Issues Relating to Miscellaneous Units," OSWER Policy Directive #9489.00-2 (April 26, 1988).
2. "Hazardous Waste Miscellaneous Units; Standards Applicable to Owners and Operators," Final Rule, Federal Register, Vol. 52, No. 237. p. 46946.
3. Minimum Technology Guidance on Double Liner Systems for Landfills and Surface Impoundments -- Design, Construction, and Operation, DRAFT, EPA 530-SW-85-014, (May 24, 1985).
4. "RCRA Corrective Action Plan," OSWER Policy Directive #9902, (November 14, 1986).
5. Technical Guidance Document: Construction Quality Assurance for Hazardous Waste Disposal Facilities, EPA 530-SW-86-031, OSWER Policy Directive #9472.003; (October 1986).