Permitting and Inspecting Thermal & Mechanical Units

Rule Overview: Permitting and Inspecting Thermal & Mechanical Units Standard Subpart X Rules Applicable to All Unit Types

The following section entails what permitting conditions are considered applicable to all types of Subpart X units. You will see that these are also standard to many other regulated units. The applicability of each still needs to be determined on a site by site basis. If a rule does not apply to the specific unit then it should not be included in the permit. (Example: if the Subpart X unit does not treat Toxicity Characteristic (TC) wastes, then TC conditions do not need to be addressed). The permit writer should work closely with the permittee in order to determine what is applicable or not, and what changes may be anticipated for the life of the permit in order to reduce future permit modifications.

Starting Out….What Do You Need?

- Technically complete Part A and B applications
- Administrative record
- Any model permit language

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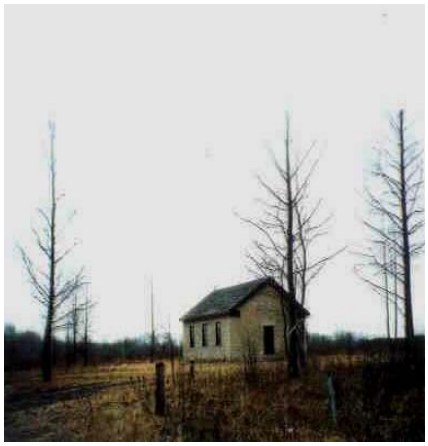
The permit application should also have each of its sections written in a clear and transparent manner so that the public will understand the language. Since the application is eventually taken, split up, and attached as part of the final RCRA permit, the permit application needs to be very understandable.

Before You Start (cont'd)

- Endangered Species evaluation (Other Law Compliance Records)
- Evaluation that RCRA and Air programs do not conflict (e.g., State law prohibiting open burning)



Each Agency that issues a RCRA permit must conduct at least a request for information on endangered species and historical preservation impacts from the location where the permit is issued or may be impacting. An example of impacting may be if a migratory animal uses the facility or if contamination is migrating off-site. Therefore, information concerning not only species at the site, but neighboring properties may be needed. If species that are protected utilize the facility, the United States Fish & Wildlife Service (USFWS) or it's State counterpart may require an ecological assessment on the potential impact of the unit seeking a permit to the protected species. The USFWS has the final say on protecting the species or its habitat and may require the permitting agency (U.S. EPA or the State) to obtain a permit to comply with the Endangered Species Act. Conditions of the agency permit are then written into the permittee's RCRA permit.

Precautions Before You Write...

- Environmental sampling data should have been collected before the permit is written.
- Make sure you know where data gaps may be in the application so you can write a compliance schedule.
  - This is not a substitute for having a technically complete application
  - Human health and the environment must be protected.
- Language should be enforceable.
  - Use clear timeframes
  - "Must" or "shall" instead of "should"

Requiring sampling data prior to permit issuance is analogous to the old landfill permitting requirements. Data is needed in order to determine the type of ground water monitoring program that will be written into the permit (detection, compliance, or corrective action). Without data these conditions can not be determined and a permit should not be issued. The same applies for other environmental data such as requiring the air model to be completed in order to establish critical operating conditions in the permit.

Charts showing limitations and triggers should be created to ease inspection evaluations for compliance.

Before you Write (cont'd)

- If you are referencing the application as part of the permit, make sure that text is enforceable too.

Subpart X Permit Conditions

- Standard Conditions
- Waste Minimization
- Land Disposal Requirements
- Toxicity Characteristic
- Air Emissions
- Corrective Action
- Unit Specific
- Schedule of Compliance

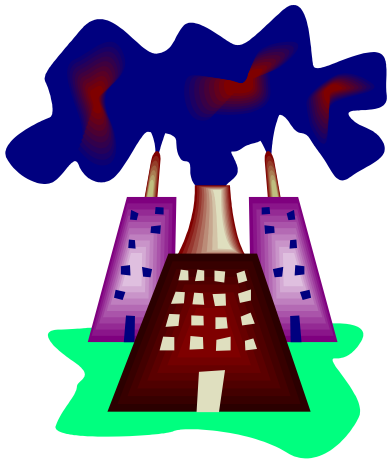
Standard Conditions

- Effect of permit
- Permit actions
- Severability
- Duties and requirements
- Signatory requirement
- Confidential information
- Documents to be maintained at the facility

Enforcement needs these conditions referenced to the regulations in order to enforce any violations. Adding the citation helps if the rule is updated during the permit period (5-10 years).

Waste Minimization

- Annual certification condition
- Hazardous waste reduction plan
  - Updated every 2 years
- Waste reduction implementation report
  - Yearly on specific date



Waste Minimization is applicable to all permits, including emergency permits.

Waste Minimization Applicability

- This is one of the most important parts of a Subpart X permit for OB/OD.
- Should address how the facility will be working on new or existing demilitarization technologies, and working towards inventing better methods of OB/OD or replacement technologies.
- Shredders and compactors should show how technology improves waste minimization but doesn't cause problems due to lack of maintenance or air emissions that are not controlled.

Warning...

- Remember: There will be munitions that have to use OB/OD.
- The point is to see if the waste types can be limited, and still be environmentally safe and safe for the operators and people managing the wastes.
- Geologic repositories need to address staging issues above ground as ancillary with environmental controls.

Land Disposal Restriction (LDR) Requirements

- General conditions
  - Self-Implementation
  - Mixture rule
  - Prevent dilution
  - Maintain waste lists
- Testing and related requirements
  - Testing/knowledge
  - TCLP
  - Treatment technology
  - Treatment concentrations
  - Record keeping

LDR Applicability

- Requirements are applicable to Subpart X units because the Land Disposal Regulations apply treatment technologies to munitions and other wastes. LDR charts should be checked to see what applies to the specific unit.

LDR Applicability (cont'd)

- Facilities have to document that treatment was performed correctly for the applicable waste types.

OB/OD is normally not considered disposal. It is a treatment technology. If wastes are left in place at OD ranges, then more LDR standards may be put in place to address metals and explosives in the soil. Otherwise, corrective action should be used to address the hazardous constituents.

A chart should be created for the inspector on specifically which LDRs apply. Permit writers tend not to detail LDR requirements since they are self implementing. Inspectors usually have to work with the permittee prior to permit issuance for compliance under interim status. If an inspector finds LDR compliance problems they may be effectively taken care of with specific permit conditions relating to the problem areas.

Land Disposal Storage

- Add storage prohibitions if the facility stores munitions or other wastes in containers, or tanks, or bunkers.
- Not needed if only open burning and/or open detonation being addressed, and they are shipping any hazardous waste residues off-site.
- If mechanical treatment, this also will not apply if storage is not included at the facility.

Toxicity Characteristic (TC)

- Waste identification
  - Specify treatment
  - Specify type of unit(s)
  - Waste name
  - Waste code
  - Maximum volume per unit type

A chart format is easiest to follow for the permit writer, permittee, and inspector.

TC (cont'd)

- Waste characterization
  - Testing (waste analysis plan) or knowledge
- Unit specific management

Subpart AA/BB/CC Air Emissions

- Include only if applicable to unit design
- General self-implementation provision if new standards are promulgated

Mechanical units will typically have more requirements and controls, since container and tank provisions can be applied.

OB/OD will require modeling at a minimum, and waste treatment restrictions and control will be applied.

Corrective Action

- Corrective action at the facility (general RCRA Section 3004(u) compliance)
- Corrective action beyond the facility boundary (RCRA Section 3004(v))
- Identification of solid waste management units (SWMUs).
- Or, no corrective action required at this time
- Newly identified SWMUs or releases
- Corrective action for new SWMUs or releases
- Dispute resolution

A list of provisions should be included in the permit.

Corrective Action Applicability

- Conditions should address any past contamination from the operation of the Subpart X unit(s).
- Ground water monitoring of Subpart X areas should be covered under the ground water (40 CFR §264 Subpart F) provisions that are applicable to the unit(s).
- Maintenance problems can also be addressed by corrective action if there is a potential for releases of hazardous constituents.
- All other SWMUs should be addressed.

Corrective action is easier to track if charted in the permit schedule of compliance.

Miscellaneous Unit Specific Conditions

- Waste identification
  - By unit
  - Chart type and quantity
- Location information
- Design, construction and operation
- Monitoring, maintenance, safety and inspection plans
- Surveying and record keeping
- Closure and post-closure

Unit Specific Conditions - Environmental Monitoring

- Ground water
  - 40 CFR §264 Subpart F Program
- Soil
  - Routine sampling to address accumulation
- Surface water
  - CWA coordination
- Air
  - Verification of model
  - CAA coordination
  - Pollution control devices

Subpart X Units that are indoors must present a justification in their application to reduce any environmental monitoring.

Surface water sampling conditions needs to address both sediment and water.

Risk Assessment and Land Use

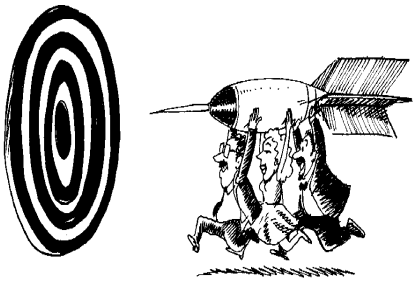
- Risk assessment
  - Controls required
  - Management plan
- Land use provisions
- Record keeping
  - Control implementation
- Safety issues
  - Present in risk assessment
  - Address in safety plan

Safety Plans or Contingency Plans are included in the application or during corrective action. U.S. EPA does not approve Occupational Health and Safety Administration (OSHA) issues but must assess if hazards related to unit operations are being addressed in the plans.

Risk of operators handling explosives needs to be addressed in plans. Specific treatment operations may be controlled by safety risks to the operators.

Schedule of Compliance

- Sort by regulatory issues as they are addressed in main text of the permit.
- State specific due dates
  - Within __ Days of ….



If the schedule is not specific, the inspector can not enforce it properly.

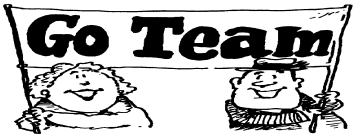
Attachments: Make Sure all Relevant Documents are Attached

- Part A application
- Facility description
- Waste characteristics
- Process information
- Risk assessment information and land use conditions
- Ground water monitoring
- Soil monitoring
- Air monitoring
- Procedures to prevent hazards
- Contingency plan
- Personnel training
- Closure and post-closure plans
- Inspection schedules
- Air treatment limit tables

Air treatment limit tables are designed on a case by case basis. They are applicable to open burning and open detonation units. The table should identified the type of waste, the amount of waste, and the maximum daily treatment limits of the unit.

Look for Help

- Here are some groups that are involved with Subpart X facilities:
  - U.S. EPA Subpart X Work Group
  - U.S. EPA National RCRA/CERCLA Federal Facility Forum
  - State Federal Facility and Subpart X Permit Writers
- Remember: You are not alone, there are other RCRA permit writers and CERCLA project Managers that can help with technology issues.



End of Rule Overview
General Standards