

## 8.0 INSPECTIONS

Once the permit is issued, compliance begins. The facility may be inspected by a RCRA enforcement inspector or a RCRA permit writer. Other specialty staff may also inspect the facility for compliance with portions of the permit they reviewed (i.e., ecological issues). The inspector can utilize other inspection checklists from the U.S.EPA Office of Enforcement and Compliance (OECA). Subpart X checklists have been developed on a site by site, permit by permit basis. A model checklist is included as [Attachment 8-1](#). While this checklist may be used as a starting point for Subpart X inspections, it should be modified as required with facility-specific data from the Subpart X permit. An attempt was made to formulate general provisions at the U.S.EPA Region 4, RCRA Miscellaneous Units Permit and Compliance Training held in February 2002. Participants in the training developed permit conditions and inspection requirements for five different Subpart X units. The results of their efforts are presented in the following case studies:

[Open Burn Unit Case Study](#)  
[Open Detonation Case Study](#)  
[Hurd Burn Unit Case Study](#)  
[Shredder Case Study](#)  
[Crusher Case Study](#)

Subpart X units are required to maintain proof that impacts are not occurring to the various environmental media. Visual inspection of the facility will confirm this. Record keeping reviews alone might not satisfy this decision. Split sampling during media sampling may be appropriate to ensure compliance. Areas that an inspector should concentrate on for Subpart X include:

- Maintenance of the unit: The inspector should verify that the Subpart X unit is maintained in accordance with the appropriate regulations and permit. In particular, the inspector should verify whether leaks, spills or releases of emissions have occurred, or are occurring from the unit. Inspect the unit when it is in operation to obtain a clearer picture of potential emission points. Leaks and spills often



*Click on the photograph to view a video clip of an open burn case study conducted*

occur during the transfer of wastes to and from the unit. Leaks can also occur around seals (e.g., around agitator seals) and manways in tank-like units. Releases of emissions can also occur during waste transfer operations. For example, emissions can be released when the wastes from a shredder or drum crusher unit are transferred to a rolloff box, hopper or other container. The physical condition and integrity of the unit should also be assessed. In particular, metal and concrete structures should be inspected for signs of stress, warping, cracking or breaches around seams. In addition, the base of the unit should be inspected for signs of erosion and uneven settlement. Any liners within or below the unit, and any associated pads, berms, or secondary containment structures should also be inspected for integrity. A review of the maintenance logs can provide information on chronic problems with certain pieces of equipment. Maintenance and operational records which should be inspected for the unit includes all available operating logs, inspection and maintenance logs, standard operating procedures, and environmental monitoring reports.

- Operation of the unit: The inspector should verify that the Subpart X unit is operated in accordance with all appropriate regulations, permit requirements, standard engineering practices, and applicable standard operating procedures. If the unit is not operated according to the design specifications, the likelihood of upset conditions increases, which could result in unpermitted releases from unit. The inspection should also verify that the vegetation around the unit is properly maintained, that any windblown ash or kickout residues are properly managed, that any fire prevention buffer zones (e.g., non-vegetated corridors) are properly maintained, and that security devices (including fences, gates, warning signs, cameras, road blocks, and barriers) are in good working condition.

- Operating conditions: The inspector should verify that the Subpart X unit is operated within the time periods and weather conditions specified in the permit. For example, it should be noted whether OB operations are occurring at times that allow for proper inspection and/or cool-down as required by



*Note the warping of the steel from burning operations. Also note debris on ground surrounding pan - evidence of kickout or spillage of ash.*

the permit. In addition, it should be noted whether OB is occurring during periods of inclement weather or high winds, which could result in a greater likelihood of residue runoff or wind-transport of contaminants. Operational logs and weather records should be inspected to determine compliance with these conditions.

- Groundwater monitoring: If there is a likelihood for wastes to be expelled during treatment (e.g., kickout during OB or OD operations), a groundwater monitoring system should be installed in accordance with the 40 CFR Part 264 Subpart F requirements. If a groundwater monitoring system is required for a Subpart X unit, groundwater sampling and inspection of the system should occur in accordance with the Subpart F requirements and permit conditions.

- Soil monitoring: If soil sampling is required, the inspector should verify that soil samples are collected at the locations and frequency specified in the Sampling and Analysis Plan (SAP). In addition, the inspector should verify that the samples are analyzed for the parameters required by the permit, and determine whether the locations are still appropriate with the passage of time.

- Surface water monitoring: If surface water monitoring is required, the sampling and monitoring program should be reviewed to ensure compliance with the permit. The inspector should also note whether different flow and weather conditions are being tracked in accordance with the sampling program.

- Waste analysis: The inspector should review whether the wastes treated by the Subpart X unit are analyzed in accordance with the procedures specified in the Waste Analysis Plan. Any deviations observed should be cited and corrective action should be required. Review operating record to ensure that permittee is maintaining documentation of an audits conducted at off-site generators.

- Residuals management: The inspector should verify whether all residuals from the Subpart X unit are removed in a timely manner and managed in accordance with the permit requirements.
- Air modeling: If air modeling was conducted as part of the permitting process for the Subpart X unit, it should be determined whether there have been any significant changes in the operation of the unit that warrant new model simulations for the time period of the permit (e.g., 5 to 10 years).
- Safety issues: The inspector should evaluate whether there have been any safety issues of concern during the operation of the unit. Any significant safety issues should be documented and reviewed to determine if corrective actions are necessary. The inspector should also consider whether the permit modifications are necessary as a result of these issues. Safety items which should be evaluated during the inspection include the communication system employed at the unit, the presence and condition of personal protective equipment, emergency showers and eye washes, and the condition of all fire-fighting equipment.
- Land use restrictions: The inspector should review all appropriate sources to verify that the land use surrounding the Subpart X unit has not changed since the last inspection. Furthermore, the inspector should verify that the appropriate records are being maintained.
- Precipitation and run-on/run-off controls: The inspection should determine if precipitation and run-on/run-off controls are being maintained at the Subpart X unit. In particular, the inspector should determine whether the precipitation controls (e.g., building roofs, container lids, tank covers) and run-on/run-off management devices (e.g., berms, ditches, stormwater collection system) for the unit are in good working condition. If failures are occurring, corrective action should be required and documented.



*Residues remaining on the ground after a open burning operation that was not properly managed.*



*To view this movie clip, click on [Rocket Blast.mpg](#) Note that the cover of the unit flies off during the burning of rocket components. This and other safety issues should be evaluated during the inspection.*

These are some of the major areas of concern which should be evaluated during a Subpart X inspection. Details on the specific conditions need to be taken from the permit and incorporated into a checklist format and maintained with the facility file. The Permittee's inspection and training program can also be utilized as a source for developing a good inspection checklist.