

the surface to cool. After the OB treatment, containment devices are cleaned of any residues. OB operations generally are restricted to daylight hours, and usually are not conducted during inclement weather.

### 2.1.1.2 Open Detonation Unit: Physical and Process Description

Open detonation (OD) is used primarily to treat munition items. OD typically is conducted in pits or trenches below ground to minimize the ejection of treatment residue, although surface detonations are performed under certain circumstances. Trenches vary in size depending on the quantity of material to be treated, and are usually 4 feet deep or greater, and can vary in size from 4 to 8 feet wide by 6 to 15 feet long.

The maximum quantities to be treated are measured by net explosive weight (NEW), which is the total weight of explosives in the munition. The NEW does not include the weight of the explosive charge used to initiate the detonation (donor charge). Military units often use Composition (C-4) (90 percent RDX and 10 percent plasticizer, such as polyisobutylene) as a donor charge for OD operations. The quantity of donor charge used is usually equal to the NEW of the munitions to be treated.

Open detonation involves placement of wastes at the bottom of the pit, along with the donor charge. The waste and charge are then covered with soil to the top of the pit. After detonation, any treatment residues should be removed to minimize the potential for releases of hazardous waste or hazardous constituents to the environment. Surrounding soils should be maintained in a manner that minimizes the potential for fire posed by dry vegetation or other hazards.

### 2.1.2 Enclosed Treatment Units

In recent years, DoD has encouraged the use of controlled thermal treatment units for the destruction of pyrotechnics, small arms ammunition and



*View of open detonation.*



*Open detonation is usually conducted in an excavated pit to minimize the ejection of treatment residues, although surface detonations may be performed. Not the rain cover in the background which can be rolled over the area.*