



WAYCROSS FIRE DEPARTMENT

AIR CURTAIN DESTROYER OPERATING GUIDELINES

Step 1 Site Location and Preparation

Select a site that will likely have a low water table; can be easily excavated and will be no less than 300 feet from any occupied structures.

Step 2 Pit Preparation

Excavate the pit (Figure 2) using either a front end loader or backhoe. The pit dimensions are 8 feet wide x 12 – 15 feet deep x 15 – 30 feet long (depending upon the length of the ACD manifold). In no case should the 8 foot width be exceeded. The pit must be excavated with at least three (3) vertical sides in soil capable of maintaining vertical walls of 15 foot depth without failure. Additional wall support may be necessary. Caution must be exercised to ensure that walls are not undercut during excavation. If a front end loader is used for excavation, the end used for travel must be filled in with dirt beginning at the end of the manifold and filling up ramp.

Step 3 Air Curtain Destructor (ACD) Set Up

Using a small berm of soil (1 to 1 ½ feet high) place the Manifold Plenum and Nozzles in a way that the manifold is properly supported and the space between the Manifold and ground is sealed, (Figures 1 & 2). Rotate the manifold until the air curtain will be directed at an imaginary horizontal line 24” to 36” below the top of the opposite wall. Slide the skid containing the blower and motor into place and connect to Manifold.

Step 4 Ignition Procedures (Refer to Figures 3, 4 & 5)

Load the pit half full of a homogenous mixture of trees, logs and large brush. Douse the wood with a ½ gallon of fuel oil putting the majority of the fuel oil on the front center side of the pit. Ignite the wood at the same point. Allow sufficient time for the fire to take hold before introducing any air from the destructor. As the fire grows in intensity gradually bring the blower up to optimum speed (generally between 1,100 and 1,400 rpm depending on the size, type and make of the blower).

CAUTION: Do not use tires or highly volatile solvents such as mineral spirits, gasoline, solvents, etc. for ignition

NOTE: Only wood waste consisting of trees, logs, stumps and large brush relatively free from soil and lumber may be burned. Leaves, sawdust and other densely packed wood wastes; paper (any type); chemically treated, coated or impregnated wood CANNOT be burned.

Fire Prevention Bureau

1820 Mary Street 🚒 Waycross, Georgia 31503 🚒 PH # (912) 287-2937 🚒 FX # (912) 287-2904

www.waycrossga.com

Step 5 Loading Procedure

Once the fire reaches full intensity, successive intermittent charging may begin.

The intervals between charges may be determined by observing the burning rate. Generally, if the fire is kept at its maximum intensity, it will keep one man operating a front end loader or clam shell bucket busy constantly. The charges should be alternated between light and heavy material. Also, the material should be charged toward the rear of the pit under the ACD Manifold.

The pit should not be overloaded, that is the material should not be piled up so high that it will protrude above the air curtain. Also, no material should extend outside the boundaries of the pit and air curtain where sufficient air is not available from the nozzles.

Step 6 Maintenance & Safety Requirements

Ash removal is required in order to maintain efficient and proper combustion. Ashes should not be allowed to build up into the pit higher than 1/3 the pit depth or to the point where they begin to impeded combustion and are blown out of the pit, whichever comes first.

If spalling (cave off) of the pit walls occurs during operation, a new pit must be constructed and the existing pit filled with soil.

Any accumulation of water in the pit must be removed prior to operation.

For reasons of public safety, it is recommended that a fence or barrier surround the combustion pit.

A stop guide or restraint must be provided at the loading side of the pit in order to keep the loader from getting too close to the pit during the charging operations

No more than one ACD is allowed to be operated within a ten (10) acre site at one time. In the event there is a need for multiple burning pits there shall be a minimum of 1,000 feet between each burning pit. Each additional ACD shall be separately permitted.

Refer to our website @ www.waycrossga.com/revision for outdoor burning rules or day to day burning advisories.

For further information, call the Waycross Fire Department @ (912) 287-2937 to speak to a Fire Marshal.

FIGURE 1 - Site Preparation

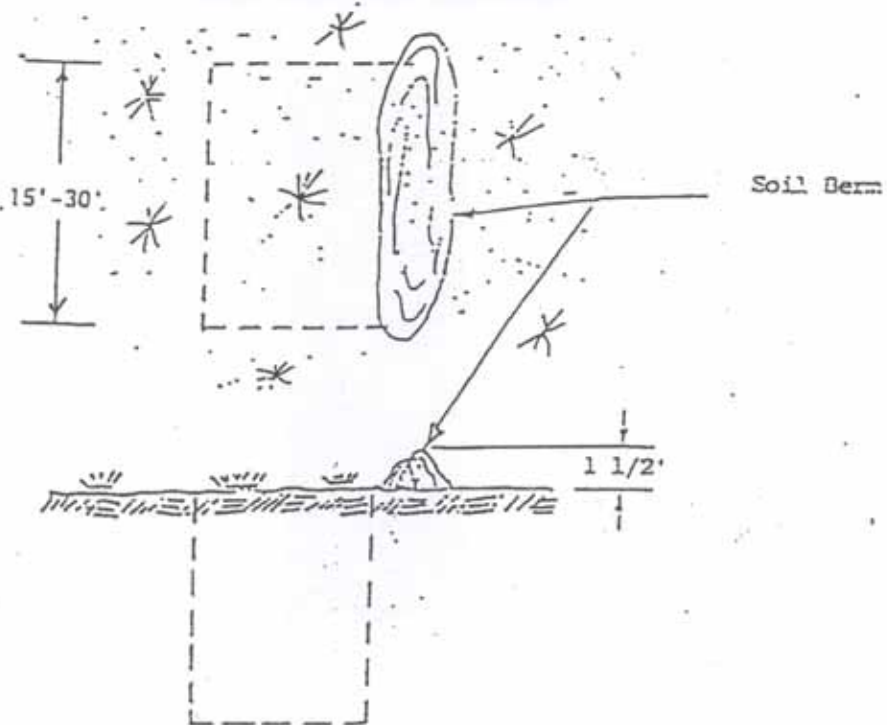


FIGURE 2 - Air Curtain Destructor (ACD) Set up

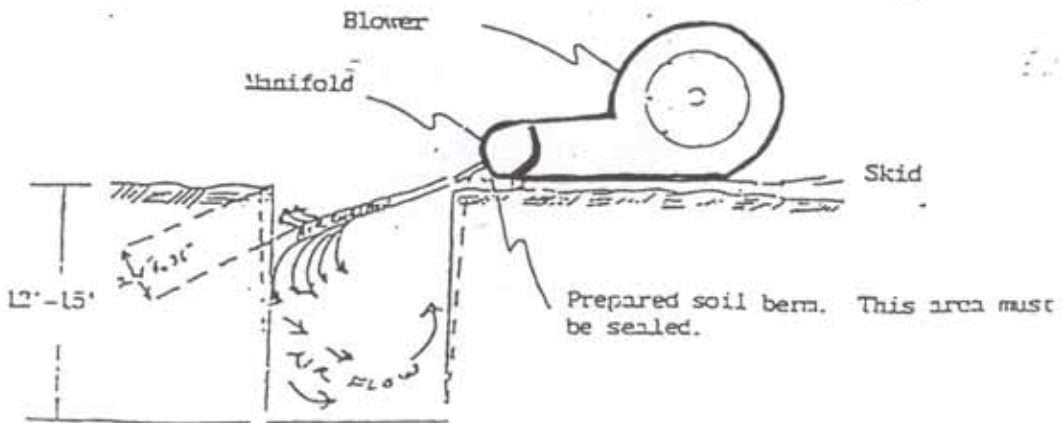


FIGURE 3 - Cross-section of Pit and ACD

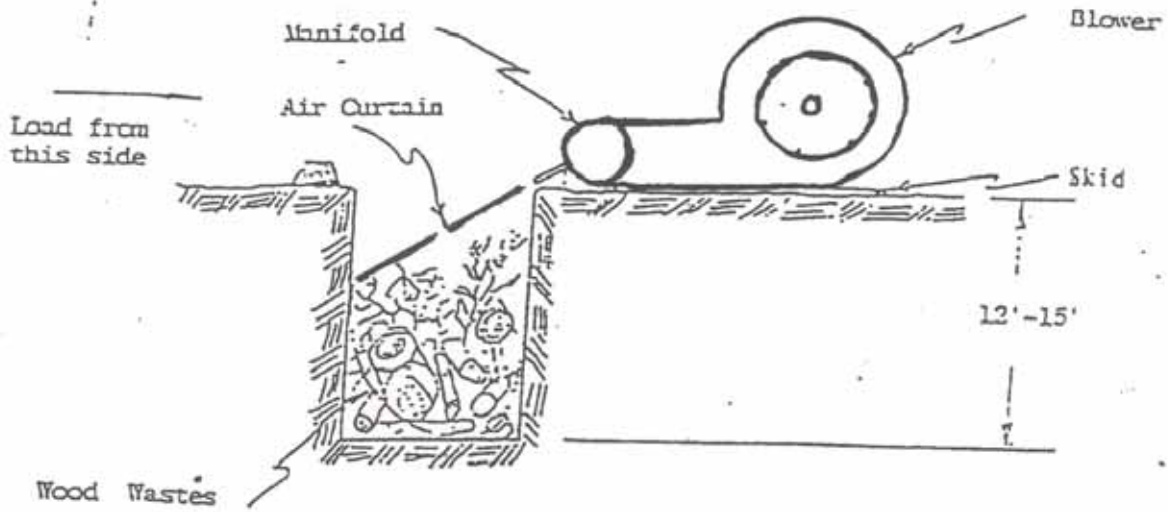


FIGURE 4 - Profile of Pit and ACD

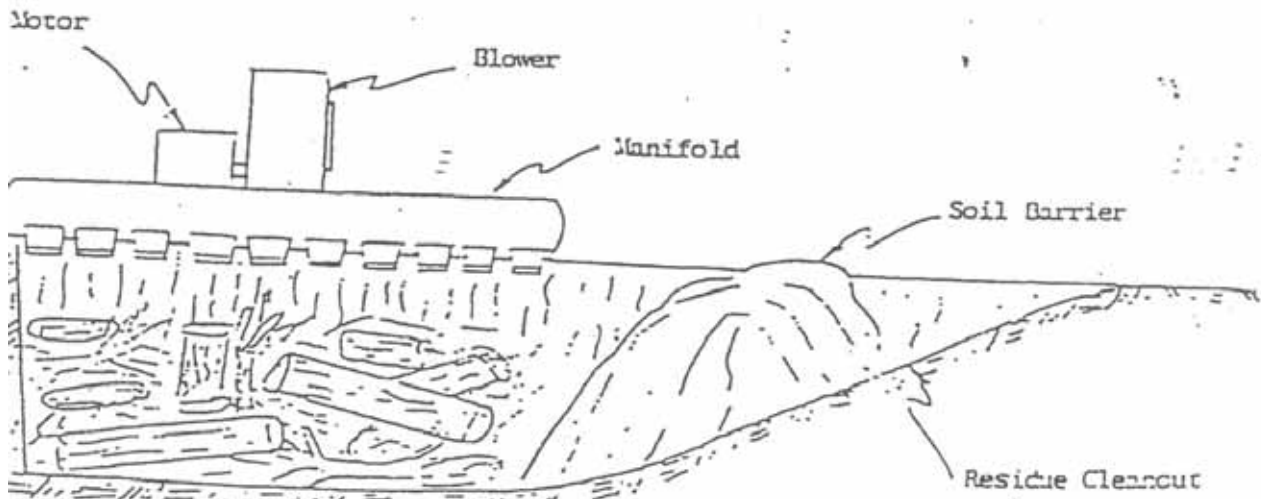


FIGURE 5 - Plan View of Pit and ACD

