CASE I

A maintenance man was working on a metal stair platform and wanted to use a ¼ -inch electric drill. The drill had a three-wire power cord. An extension cord running from the source of power also was a three-wire cord, but was not long enough. In order to connect the drill to the extension cord, the man obtained another short extension cord from the tool crib.

As the man started to drill, he was electrocuted.

What caused the incident? What could have been done to prevent this incident and similar incidents in the future?

Guide and Background Information for Case I

Explain to the group, if asked, that the drill and cord were in proper working order, with no shorts. Also, the extension from the power source was okay. However, the extension cord from the tool crib had been improperly wired. The grounding lead had been connected to the "hot" terminal, so that the frame of the drill was energized. When the man grasped the grounded metal stair platform, he was electrocuted.

Once this fact is brought out, have the group pursue the question of preventing another such accident. In the state in which this accident occurred, three workmen had been electrocuted because of improperly wired electrical connections. (This report was from a State Industrial Commission.)

Following are other pertinent facts:

- The maintenance man was not standing on damp or wet ground. The area was dry.
- The extension cord was made up by a tool crib attendant.
- There were no rules in effect concerning procedure for maintenance and repair of equipment.
- The cord had not been tested.

Possible Solutions for Case I

1. All extension cords and electrical equipment should be immediately tested by a qualified electrician before allowing further use of such equipment.
2. A strict rule should be put into effect that only qualified persons be allowed to repair equipment.
3. Electric tools and equipment should be inspected on a regular schedule to make certain they are properly wired, grounded, and in proper working

order. The equipment should also be marked to indicate to the user that it has been inspected. The date of inspection should be shown.

4. All electric tools must be grounded regardless of use or location.
5. Make certain all workers understand that they are not to make repairs to tools or equipment.
6. If tool crib attendants are to maintain equipment, they should be properly trained.

Summary

Summarize the discussion by pointing out that the unsafe condition must be eliminated—in this case, the improperly wired extension cord. The only way this can be done is to test all extensions and make certain there are no other defective ones. Once all the electrical equipment has been checked out, some procedures must be set up to make certain the equipment is kept in good condition.

Because there are also unsafe procedures involved, provisions must be made to help prevent a recurrence. In this case the tool crib attendant did not follow safe procedures and the maintenance man did not make certain that the extension was okay. Safe procedures should be enacted and enforced. Stress the importance of eliminating all possible causes.