Applicable OSHA Standards: 29 CFR 1926.404

1. Purpose & Scope

1.1. To establish methods, guidelines and responsibilities to protect Cleveland Integrity Services Inc. employees from electrical exposure while at a work location.

1.2. This program applies to all employees and subcontractors working within Company controlled job sites. This assured equipment grounding conductor program covers all cord sets, receptacles which are not a part of the building or structure, and equipment connected by cord and plug which are available for use or used by employees at a work location.

2. Introduction

2.1. All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, will have approved ground-fault circuit interrupters for personnel protection. Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5kV, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with ground-fault circuit interrupters.

3. General Requirements

3.1. Employees who are exposed to electrical hazards at a work location will use either ground fault circuit interrupters or assured equipment grounding conductor program to protect them from these hazards. These requirements are in addition to any other specific requirements for equipment grounding conductors.

3.2. The Company has established and implemented an assured grounding conductor program at all work locations covering all cord sets, receptacles that are not part of the building or structure and equipment connected by cord and plug that are available for use, or are in use by employees.

3.3. A written description of the program including the specific procedures adopted by the Company will be available at each work location for inspection and copying by the Assistant Secretary and any affected employee.

3.4. The Company will designate one or more competent persons to implement the program at each work location. "Competent person" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. At most work locations the competent person will be the Site Supervisor.

3.5. Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and

not exposed to damage, will be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage. Equipment found damaged or defective will not be used until repaired.

3.6. Damaged items will be tagged "DO NOT USE", removed from service until repaired and tested.

3.7. The following tests will be performed on all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and cord- and plug-connected equipment required to be grounded:

3.8. All equipment grounding conductors will be tested for continuity and will be electrically continuous.

3.9. Each receptacle and attachment cap or plug will be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor will be connected to its proper terminal.

3.10. The Company will not make available or permit the use by employees of any equipment which has not met the requirements of this program.

3.11. Tests performed as required in this program will be recorded. This test record will identify each receptacle, cord set, and cord- and plug-connected equipment that passed the test and will indicate the last date it was tested or the interval for which it was tested. This record will be kept by means of logs, color coding, or other effective means and will be maintained until replaced by a more current record. The record will be made available on the work location for inspection by the Assistant Secretary and any affected employee. A copy of this program is kept on each work location with the Site Supervisor.

3.12. The Site Supervisor is responsible for implementing and monitoring the GFCI and assured grounding program.

3.13. The GFCI is not a replacement for visually checking all cords, wires, and other electrical devices for defects on a daily basis.

3.14. All 120 volt, single phase, 15 and 20 ampere receptacles will be of the grounding type and their contacts will be grounded by connection to the equipment grounding conductor of the circuit supplying the receptacles in accordance with applicable requirements of the National Electrical Code.

3.15. All 120 volt cord sets (extension cords) will have an equipment grounding conductor which will be connected to the grounding contacts of the connectors on each end of the cord. Extension cord sets used with portable electric tools and appliances will be of the three-wire type and will be designed for heavy or extra heavy-duty usage. Flexible cords used with temporary and portable lights will be designed for heavy or extra heavy-duty usage.

3.16. The exposed noncurrent-carrying metal parts of 120 volt cord and plug connected tools or equipment that are likely to become energized will be grounded in accordance with the applicable requirements of the National Electrical Code.

3.17. Employees will visually inspect receptacles, flexible cord sets (extension cords), electrical equipment and electrical tools before each day's use for external defects such as:

3.17.1. Deformed or missing pins;

3.17.2. Insulation damage;

3.17.3. Indication of possible internal damage.

3.18. Where there is evidence of damage the item will be taken out of service until tests or any required repairs have been made.

4. Testing

4.1. All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure, 120 volt flexible cord sets and 120 volt cord and plug connected equipment which are in use by employees, will be tested.

4.2. A qualified person will be designated by the Site Supervisor to be responsible for testing, tagging and documentation of testing of all equipment-grounding conductors.

4.3. All equipment-grounding conductors will be tested for continuity and they will be electrically continuous. A continuity inspection device will be used or a voltmeter that is specifically designed to test for continuity.

4.4. Each receptacle and attachment cap or plug will be tested for correct attachment of the equipment-grounding conductor. The equipment-grounding conductor will be connected to the proper terminal.

4.5. All required test will be performed:

4.5.1. Before its first use;

4.5.2. Before the equipment is returned to service following any repairs;

4.5.3. Before the equipment is used after any incident that can be reasonably suspected to have caused damage (for example, when a cord is run over).

4.5.4. At intervals not exceeding 3 months, except that cord sets and receptacles, which are fixed and not exposed to damage, will be tested at intervals not exceeding 6 months.

4.6. Test verification will be by means of a color coded marking tape on the receptacle, cord set or equipment to identify that it has passed the test and to indicate the quarter as illustrated in the following table:

Quarter	Month	Color Code	Number
1st	January	White	1
1st	February	White	2
1st	March	White	3
2nd	April	Green	1
2nd	May	Green	2
2nd	June	Green	3
3rd	July	Red	1
3rd	August	Red	2
3rd	September	Red	3
4th	October	Orange	1
4th	November	Orange	2
4th	December	Orange	3
	Repair Color	Brown	

5. Training & Testing

5.1. Training about the program will be provided to all affected employees prior to work assignments involving exposure to electrical hazards. Training will primarily involve a thorough review of what the standard covers (29 CFR 1926.404), Company policy and work experiences relating to implementation of this program.

5.2. Personnel so trained will be tested as a way to help confirm and document their understanding of information presented. A score of between 80% and 100% will require a review of missed questions, if any, and the score corrected to 100%. A score of below 80% will require complete retraining and testing.

5.3. The test format is included as Appendix 1 in this program.

Appendix 1

Ground Fault Circuit Interrupters (GFCI) and Assured Grounding Program

TEST

Employee Name (Print): _____

Employee Signature: _____ Score: _____

Instructor: _____ Date: _____

Circle the answer that is most correct:

1. This policy applies to all employees and subcontractors working within Cleveland Integrity Services Inc. controlled job sites.

2. Employees may use any equipment that has not met the requirements of this program.

3. The GFCI is not a replacement for visually checking all cords, wires, and other electrical devices for defects.

4. All 120 volt cord sets (extension cords) will have an equipment grounding conductor which will be connected to the grounding contacts of the connectors on each end of the cord.

5. All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure, 120 volt flexible cord sets and 120 volt cord and plug connected equipment which are in use by employees, will be tested.

6. A qualified person, designated by the Site Supervisor, is responsible for testing, tagging and documentation of testing of all equipment-grounding conductors.

7. Test verification will be by means of a color-coded marking tape on the receptacle, cord set or equipment to identify that it has passed the test and to indicate the quarter it was tested.

8. All test will be performed whenever there is time for it.

9. Each receptacle and attachment cap or plug will be tested for correct attachment of the equipment-grounding conductor.

10. The equipment-grounding conductor will be connected to the proper terminal.

Cleveland Integrity Services Inc.
Ground Fault Circuit Interrupters (GFCI) and Assured Grounding Program

TEST ANSWER KEY

1. T
2. F
3. T
4. T
5. T
6. T
7. T
8. F
9. T
10. T