

Grounding Electrode System Investigation Checklist

Site Location: _____ Investigator Name: _____

Date/Time: _____

Visual Inspection

Soil

1. What predominant soil type is it at this location?
 - a. Rocky/Gravelly: _____
 - b. Topsoil: _____
 - c. Sandy: _____
 - d. Ash/Peat/Fill: _____
 - e. Other? Describe: _____
2. Is there grass/vegetation? **Yes** **No**
3. Is there standing water? **Yes** **No**

Grounding Electrode System

1. What types of electrodes are used? (Select all that apply)
 - a. Water piping: _____
 - b. Structural metal: _____
 - c. Ground ring: _____
 - d. Concrete-encased electrode: _____
 - e. Ground rods: _____
 - f. Chemical ground rods: _____
 - g. Grid-type system: _____
 - h. Ground plates: _____

2. What is the estimated size of the grounding electrode conductor?

----- AWG or mm²

----- AWG or mm²

----- AWG or mm²

a. Bare grounding electrode conductor? **Yes** **No**

b. Stranded conductor? **Yes** **No**

3. What types of terminations are used to make connections? (Select all that apply)

a. Exothermic Weld: -----

b. High Compression: -----

c. Listed Connectors: -----

4. Evidence of Corrosion? Yes No

a. Suspected Location: -----

b. Suspected Location: -----

c. Suspected Location: -----

5. Is perimeter fence bonded to the building GES? Yes No

6. Is emergency generator bonded to the building GES? Yes No

Mechanical Inspection

1. Are any loose connections present in the grounding electrode system?

Yes **No** If yes, list location below.

a. Suspected Location:

b. Suspected Location:

c. Suspected Location:

Metering Inspection

1. Maximum AC current on any grounding electrode conductor: _____ A.

a. Location: _____

2. Maximum DC current on any grounding electrode conductor: _____ A.

a. Location: _____

3. Earth Ground Resistance Measurements

a. Type of Tester Used: (Select All That Apply)

i. Clamp-on Earth Ground Tester: _____

ii. Three-Terminal Tester: _____

iii. Four Terminal Tester: _____

4. Earth Ground Resistance Readings

a. Reading #1: _____ Ω Direction of Test: _____

b. Reading #2: _____ Ω Direction of Test: _____

(if applicable)

c. Reading #3: _____ Ω Direction of Test: _____

5. Two-Point Bonding Measurements

* Below, record the readings that are **greater than 1 Ω** .

• Between _____ & _____ : _____ Ω

Possible Cause: _____

• Between _____ & _____ : _____ Ω

Possible Cause: _____

• Between _____ & _____ : _____ Ω

Possible Cause: _____

• Between _____ & _____ : _____ Ω

Possible Cause: _____