Marion Environmental, Inc. – MEI Monthly

February 2017



PROFILE OF THE MONTH-Roger Poole

Roger Poole has been with MEI for almost 10 years. He was a driver of considerable experience before landing at Aqua Treat, where he now hauls dump trailers, roll offs, tankers, box trucks, and virtually any equipment in our fleet. All of which require different finesse on the road, and all of which Roger manages with skill. He is one of our utility drivers: conscientious behind the wheel and friendly to customers.

He is particularly consistent in the care and upkeep of his vehicle. In this line of work, it is not uncommon after a full day for someone to arrive back at the office tired, muddy, and with a truck that looks like it's been through war. What is uncommon is to then stay to clean off the tires, the interior, and to get the truck shiny and ready again for the next day. That is something Roger does on a regular basis. Oftentimes, when the office is nearly empty, you can find Roger leaning on the steps of his tractor, wiping down the last spots of dirt from the floorboard. That is the kind of pride he takes in the job, and why we're so proud to have drivers like him as part of our team. Marion Environmental Inc. is one of the leading providers of environmental consulting, remediation, and emergency response in the southeast. Our goal is to provide cost effective solutions to environmental problems. Making *our* standard, industry standard.

THE IMPORTANCE OF GROUNDING AND BONDING

We always talk about the importance of grounding and bonding. In certain situations that importance could mean the difference between life and death. When responding to a gas release, proper grounding and bonding are critical before any recovery can begin. A spark can be lethal and effective grounding and bonding must be properly installed and then checked by a safety officer. At MEI, we constantly train and re-train, and mentor those new to the team. The challenge is to stay focused on the task at hand. Below are some very important bullet points that everyone should remember when dealing with grounding and bonding. Other specific or specialty techniques will be addressed in our formal training course.

GROUNDING AND BONDING 101:

- 1. Set your grounding and bonding first and let it rest or settle while you are setting up the other aspects of the project.
- **2.** Always use proper clamps and cables (no battery cables or clamps EVER!)
- **3.** Always ground and bond to bare metal. You will not get a good connection and will always encounter resistance on painted and rusted surfaces.

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THE IMPORTANCE OF GROUNDING AND BONDING Continued

- 4. Always check continuity with OHM meter prior to operation commencement. Our ultimate goal is zero ohms on everything, but sometimes that is impossible to achieve. Therefore, our goal on products with a flash point of 140 degrees and above is 10 ohms or less. Products with a flash point of 140 degrees or below are 5 ohms or less.
- 5. We ground and bond EVERYTIME no matter the product. The reason for this is it keeps us in check with procedures, and we never have to worry about whether we should ground and bond.

These are just a few steps that have to be done in order to properly ground and bond. Other techniques such as "completing the circle" are addressed in our formal training.



SAFETY TIP

The process of <u>bonding and grounding</u> can be defined as providing an electrically conductive pathway between a dispensing container, a receiving container and an earth ground. This pathway helps eliminate the buildup of static electricity by allowing it to safely dissipate into the ground.

Both the National Fire Protection Association (NFPA) and the Occupational Safety and Health Administration (OSHA) have bonding and grounding requirements. NFPA addresses the need for bonding and grounding in NFPA 30, the Flammable and Combustible Code. In the 2015 edition of NFPA 30, Chapter 18 Part 5.2.2 states that a means must be provided to minimize the generation of static electricity when transferring flammable liquids. NFPA 77, Recommended Practice on Static Electricity, covers the fundamental principles of effectively managing static electricity.

OSHA's requirements for bonding and grounding in general industry are referenced in the Flammable Liquids Standard, 29 Code of Federal Regulation (CFR) 1910.106(e)(6)(ii). The regulation states, "Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100°F (37.8°C), shall not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floorplate on which the container stands while filling is electrically connected to the stem or where the fill stem is bonded to the container during filling operations by means of a bond wire, the provisions of this section shall be deemed to have been complied with."

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