



NEWSWIRE

Update of MAEC Activities

April 2005

Electrical Safety Checks

The Dairy Inspectors from the Michigan Department of Agriculture (MDA), in cooperation with the Michigan Agricultural Electric Council (MAEC), conducted an electrical safety check program on Michigan dairy farms during their routine farm visits in September and October, 2004. In addition to their regular inspections, the dairy inspectors take a simple voltage measurement from the milk tank to the floor that may reveal electrical safety problems somewhere on the farm. This program has been on-going since 1997. The MAEC provides the test equipment, and last August, met with the Dairy Inspectors to explain the procedures and provide equipment maintenance and voltmeter calibration. The inspector leaves the dairy producer an informational brochure with the voltage measurement and contact information to request free assistance from the power supplier if a follow-up evaluation is needed.

Out of a total of 864 safety checks, ten farms or approximately 1.2% had a voltage measurement that was of concern. After being notified by the dairy inspector, most producers were interested in working with the power supplier to quickly resolve any electrical issues. This year a potential electrocution was averted by the electrical safety checks. Two farms next door to each other were both reading very high voltages measured from equipment to earth. The source was not at the farm with the higher reading. At the other farm a faulty sump pump was discovered. According to personnel conducting the follow-up evaluation, anyone who would have touched the water in the sump would have been exposed to serious danger. With the diligent work of the farmers involved, power supplier personnel, and the dairy inspector, an impending disaster was averted.

Ag Grounding & Wiring Course

The Ag Grounding and Wiring Course was held in Wayland with eleven participants. This two day course provided training for electricians in the latest Code rules and techniques for wiring agricultural buildings. The environment around livestock facilities creates the need for some special wiring procedures that are different than for other types of facilities. Emphasis was placed on grounding, equipotential plane installation, central point distribution, and power distribution to buildings. Participating electricians received actual hands-on training with recommended wiring materials for farm buildings, and they did an actual change-over of 3-wire feeder supplying a building to a 4-wire feeder. There is a leaflet describing the training with the names of the electricians, company and location. This information is also available on the internet at <http://www.egr.msu.edu/age/>.



2005 MAEC Officers

Officers for 2005 are Steve Wallenwine of Consumers Energy as Chair, Dan Nelson of Great Lakes Energy as Vice-Chair, and Truman Surbrook of MSU as Secretary.

A three day course will be conducted May 17 through 19, 2005 in East Lansing dealing with training personnel to evaluate customer neutral-to-earth voltage concerns. The cost is \$450, and registration information can be obtained by calling 888-817-8895 or visiting the web site <http://www.egr.msu.edu/age/>. On the first day participants will receive instruction in electrical theory and measurement procedures related to neutral-to-earth voltage evaluations. Sources of neutral-to-earth voltage will be discussed and demonstrated on a trainer that creates realistic situations that participants would experience in the field. The second day will concentrate on instrumentation and procedures for identifying sources of neutral-to-earth voltage at a livestock farm or swimming pool location. On the third day participants will travel to a site where an actual evaluation will be conducted. Mitigation techniques and electrical code issues will also be discussed.

Telephone Pedestal Decal

The MAEC and the Telecommunications Association of Michigan have been working together for some time to improve communications between electric power suppliers and telecommunications providers with respect to separation of primary and secondary neutral conductors at customer locations where neutral-to-earth voltage from off-site was of concern. Electric power suppliers install a notice decal on each transformer pole where the neutrals have been separated. If the site is served with an underground telecommunications cable, there is a grounding shield on the cable that can act as a by-pass of the electrical system neutral separation. Now there is a procedure where telecommunications providers can be notified that a cable shield separation is advisable. A set of specifications have been developed for the telecommunications provider to use to make the cable shield separation. Then a decal is now affixed to the telecommunications pedestal that informs future service personnel that the cable shield has been intentionally separated for the purpose of neutral-to-earth voltage mitigation.

Approval has been granted by the Office of Regulatory Reform for the Public Service Commission to proceed with rule making related to development of a procedure to deal with neutral-to-earth voltage disputes between a customer and the utility. The next Commission action is to issue a Notice of Hearing announcing a public hearing to gather information and recommendations. It is not known at this time whether the Commission will consider the procedure submitted by the agricultural organizations or whether that procedure will need to be resubmitted at the hearings. As soon as specifics are known, information will be passed on to Council members.

Renewable Energy

Tom Stanton from the MPSC staff provided an overview of the Michigan Renewable Energy Program at the December 2004 meeting of the MAEC. There are several working groups dealing with renewable energy issues. There is a biomass group, a solar energy group, and a wind energy group. There are wind energy maps of Michigan available that are helpful in determining which areas have realistic potential for the development of wind energy. See www.michigan.gov/eorenew (which is the renewable energy page for the State Energy Office). On that page, "Michigan Wind Energy Resource Maps" is prominently linked in the middle of the page. A CD is also available for free from the State Energy Office which includes a freeware GIS viewer program and the entire data set upon which the maps are based.

At the February 2005 meeting of the MAEC Dulcey Simpkins of the State Energy Office reviewed the status of the Michigan Biomass Energy Program. A main emphasis at the present time is to encourage biomass energy projects in Michigan to serve as demonstrations that biomass energy production in Michigan does work. Grants are available to encourage development of projects and to produce data that can be useful for biomass project development in Michigan.

The Michigan Agricultural Electric Council develops and presents educational programs related to electrical issues in the agricultural community. Members include electric power supplier representatives, the Michigan Public Service Commission, the Michigan State University Extension Field Staff, and Michigan State University Campus Faculty. Department of Agricultural Engineering, 103C Farrall Hall, East Lansing, MI 48824-1323

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