

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

FY 2014 Insp.

A569424874

FACILITY: ZITEK CORP dba H.O. TRERICE CO.	SRN / ID: A5694
LOCATION: 12950 WEST MILE RD, OAK PARK	DISTRICT: Southeast Michigan
CITY: OAK PARK	COUNTY: OAKLAND
CONTACT: Dave Furgerson, Plant Manager	ACTIVITY DATE: 02/28/2014
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance
SUBJECT: FY 2014 inspection of Zitek Corporation, DBA H.O. Trerice Company	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

E-file: A5694 - SAR - 2014 02 28

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PTI voids: Permit-to-Install Number 106-99A dated October 28, 2002, for Mercury (Hg) filling process for industrial thermometers with a primary and a secondary carbon canister was voided on 03/19/2008 because the Hg process was removed; PTI No. 106-99 on 10/28/2002.

VNs: March 25, 1998 and November 8, 2001 for Rule 336.1201

Consent Order AQD No. 9-2003 effective April 23, 2003: terminated on March 6, 2008, as a result of February 2008 inspection.

On February 28, 2014, I conducted a level-2 self-initiated inspection of Zitek Corporation, DBA H.O. Trerice Company ("Trerice" or "the company"), located at 12950 West Eight Mile Road, Oak Park, Michigan 48237-3214. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994, PA 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules.

The inspection was a result of MAERS-2013 questions. Based upon the additional mercury information, Trerice may be removed from MEARS.

During the inspection, Mr. David C. Furgerson (Phone: 248-399-8000; Fax: 248-399-7246; Cell: 734-552-7642; E-mail: dfurgerson@trerice.com; Web: www.trerice.com), Plant Manager, assisted me. Mr. Furgerson joined Trerice on November 28, 2012.

Mr. Roy Buntin (Phone: 248-399-8000; Fax: 248-399-7246; Cell: 248-240-5211; E-mail: rbuntin@trerice.com; Web: www.trerice.com), Plant Manager, retired in June 2013.

Trerice is a worldwide leader in the manufacture and supply of temperature and pressure measurement instruments and controls. Complete Line of Trerice Products are: pressure

gauges, industrial thermometers, electronic PID pneumatic & electric temperature & pressure controllers, bimetal thermometers, solar therm light powered digital thermometers, dial thermometers, air operated control valves, diaphragm seals, temperature regulators, etc.

According to Mr. Roy Buntin (retired in 2013), three-generation family operated company, H. O. Trerice, went bankrupt due to mismanagement in CY 2003. In February 2004, Zitek Corporation, a holding company, purchased the assets of Trerice, e.g., the patents, the building, the existing inventory; but not the corporate entity. Zitek operated a dba H. O. Trerice until bankruptcy issues were resolved in 2010; rights associated with this trade name were purchased as well. Assets only purchase was made based upon a legal doctrine that Aitek is not responsible for Trerice's liabilities. Since 2010, Trerice has legally become H.O. Trerice; stopped using Zitek dba H. O. Trerice because bankruptcy issues have been resolved.

Violation Notices

AQD's Letters of Violation (LOVs) dated March 25, 1998, and November 8, 2001, cited Trerice for Rule 336.1201 violation for installing mercury (Hg) and chemical (toluene, methyl chloride, benzyl choride, etc.) filling operations for temperature and pressure gauges. As a result of LOVs, Trerice obtained PTI No. 106-99, which was revised to 106-99A. The violations were resolved with a consent order AQD No. 9-2003, effective on April 23, 2003. Based upon February 2008 inspection and subsequent written request by Mr. Buntin, CO AQD No. 9-2003, was terminated on March 6, 2008.

In April 2003, Trerice phased out use of mercury (Hg) in thermometers and removed all equipment including carbon adsorption units (primary and secondary) and the associated stack (SV-HG-Dials). Hence, Permit-to-Install Number 106-99A dated October 28, 2002 for Mercury (Hg) filling process for industrial thermometers with a primary and a secondary carbon canister was voided on March 19, 2008, based upon the February 2008 inspection. Toluene and Stoddard solvents have replaced mercury. 60 pounds of toluene per year was used in CY 2012; most of toluene is retained in industrial thermometers being produced and small fraction is emitted to outside ambient air. The amount of Toluene emitted was 1.9 pounds per year based upon 60 pounds per year throughput (MAERS-2012, RG-Thermometers).

In all processes lead-free solder is used.

There are several small processes that are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 3361290, for example:

1. Ultrasonic cleaner bath: Dilute (1 part acid in 28 part water by volume) phosphoric acid is used. Steam is exhausted outside and spent H₃PO₄ is disposed of as RCRA Hazardous Waste.
2. Thermometer glass: Glass is bought and cut to desired size and a bulb is installed using propane flame. Since CY2008, most glass is bought pre-cut.
3. Toluene (colored using a dye – Analine blue or Sudan red) is drawn into thermometer using vacuum.

4. Heat thermometer in a water bath
5. Nitrogen filled in as inert gas into thermometer.
6. Thermometers are sealed calibrated.
7. Pressure gauges are filled with silicone or glycerin.

Safety-Kleen cold cleaner

In CY 2003, Safety-Kleen cold cleaner was removed. There is no cold-cleaner at the site anymore.

Permit-to-Install Number 106-99A

Permit-to-Install Number 106-99A dated October 28, 2002 for Mercury (Hg) filling process was voided on March 19, 2008, as the Hg process does not exist since April 2003. While Mercury-in-Glass thermometers production ceased on April 1, 2002, production of Mercury-in-Dial thermometers continued until March 10, 2003. In 2004, Zitek hired Innovative Environmental, Inc., an environmental consulting company, to remove carbon drums and to remediate a section of soil on the property.

Mr. Buntin requested to void the permit (Permit-to-Install Number 106-99A) via his letter dated February 7, 2008, to AQD. I had advised company to make such written request during the February 2008 inspection.

Consent Order AQD No. 9-2003

In addition, because mercury (Hg) processes do not exist any more since CY 2003, Consent Order AQD No. 9-2003, effective April 23, 2003, terminated on March 6, 2008, upon request pursuant to paragraph 20. Consent Order void request was made via letter dated February 22, 2008. Per Pat Slagell, Financial Analyst, MDEQ-OFM the settlement amount of \$20,000.00 has been paid in two installments: \$10,000.00 on May 22, 2003 (Doc # 97805648) and \$10,000.00 on October 20, 2003 (Doc # 97806011).

MAERS-2013 and retort mercury thermometers

Until 2013, retort mercury thermometers were imported from Germany, stored at Trerice site and shipped to food canning industry. Use of Retort Mercury-in-Glass Thermometers is required by Federal Regulations (21 CFR, Part 113; Thermally Processed Low Acid Food Packaged in Hermetically Sealed Containers – FDA). Obviously, retort thermometers were not made at Oak Park site. However, the Hg thermometers were stored, handled and shipped at Trerice site. All retort thermometers were emptied of mercury and glassware were destroyed by March 2013. About 6 pounds of recovered mercury (Hg) from the retort thermometers was disposed of according RCRA regulations using Hukill Chemicals of Auburn Hills, Michigan.

Notwithstanding the destruction, Trerice will continue to use Hg thermometers as standard for calibration of non-mercury (dyed toluene) thermometers manufactured at the site.

Hence, Trerice may be removed from MAERS.

MAERS-2011

Trerice did not report MAERS-2011 emissions for RG-Thermometers. AQD calculated emissions for RG-Thermometers based upon MAERS-2010 throughput (96.3 lbs./yr.) and corresponding toluene emissions (3.4 lbs./yr.) and MAERS-2011 throughput for RG-Thermometers (117.6 lbs./yr.). Hence Toluene emissions for RG-Thermometers are 3.4 lbs./yr. and 4.27 lbs./yr. for MAERS-2010 and MAERS-2011, respectively. AQD corrected MAERS-2011 and reported to US EPA.

Conclusion:

Permit-to-Install Number 106-99A dated October 28, 2002 for Mercury (Hg) filling process was voided on March 19, 2008, as the Hg process did not exist since April 2003. Consent Order AQD No. 9-2003 effective April 23, 2003 was terminated. Hg thermometers are continued to be still handled for calibration with attendant mercury spill hazard. Retort thermometers were destroyed by March 2013 and 6 pounds of mercury (Hg) was disposed of.

NAME J. S. Kenanahall DATE 04/14/2014 SUPERVISOR CTE