



Approval # 20020013
(Replaces 930080-U)

Environmental & Regulatory Services Division
Bureau of Petroleum Products and Tanks
201 West Washington Avenue
P.O. Box 7837
Madison, WI 53707-7837

Wisconsin COMM 10 Material Approval

Equipment: Infinity/Continuum Tank Monitoring System

Manufacturer: Andover Controls Corporation
300 Brickstone Square
Andover, MA 01810

Expiration of Approval: December 31, 2008

SCOPE OF EVALUATION

The Infinity/Continuum Tank Monitoring System, model numbers CX9400, CX9200, CX9000, CX9900, and CMX9924, manufactured by Andover Controls Corporation, were evaluated as a means of monthly monitoring in accordance with **s. Comm 10.61 (4)** of the Wisconsin Flammable and Combustible Liquids Code.

This evaluation summary is condensed to provide the specific installation, application and operation parameters necessary to maintain the subject systems in compliance with the Wisconsin Administrative Code – Comm 10.

DESCRIPTION AND USE

The various Infinity/Continuum ATG systems may be used on tanks that contain gasoline, diesel, aviation fuel, #4 fuel oil, waste oil, and some solvents (contact manufacturer for specific applications). Each of the controllers use the same processor, operating system, network interface, and software which can be programmed either with the terminal or computer interface. Parameters such as tank size, product type, and reporting formats are programmed into the unit for each tank.

The CMX 9924 is a network controller with features that are very similar to the flagship CX 9900 NetController. The CMX 9924 includes a 10bT Ethernet port, uses the same processor and firmware base as the 9900, but is a reduced-cost version that does not include the local IO bus. The interface to the underground tank probes is also identical, an RS-485 port to the MTS gauges. The 9924 was designed as a replacement for the older CMX 240 controller.

TESTS AND RESULTS

Ken Wilcox Associates tested the Infinity/Continuum System in accordance with the EPA testing protocol for automatic tank gauges and for annual tank tightness tests. The Infinity/Continuum System was found capable of detecting a 0.2-gallon per hour leak with a probability of 95.4 percent and a probability of false alarm of 4.6 percent. The Infinity/Continuum System was found capable of detecting a 0.1-gallon per hour leak with a probability of 97.6 percent and a probability of false alarm of 2.4 percent.

LIMITATIONS / CONDITIONS OF APPROVAL

General

- All monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer instructions, and certified every 12 months for operability, proper operating condition, and proper calibration. Records of sampling, testing, or monitoring shall be maintained in accordance with **Comm 10.625**.
- The manufacturer shall submit for a revision to this Wisconsin Material Approval application if any of the functional performance capabilities of this equipment are revised. This would include, but not be limited to changes in software, hardware, or methodology.
- While 3rd party testing does determine a required minimum tank level, EPA leak detection regulations require testing of the portion of the tank system which routinely contains product. Consistent testing at low levels could allow a leak to remain undetected.

During leak testing, a minimum level of product in tank shall be maintained so as to ensure testing of the portion of the tank and/or piping that routinely contains product, regardless of testing system capability. For instance, if product levels are routinely maintained at 60%, but the leak detection system is capable of testing at 15% product level, then testing shall be performed at 60% levels.

- If performing a tank tightness test, minimum tank level shall be 95%, regardless of leak detection system minimum capability, in accordance with **Comm 10.61 (3)**.

Infinity/Continuum 0.2 gph Monitoring Systems

- Critical performance parameters for the **CX9900, CX 9400, CX 9200, CX 9000,** and **CMX9924** consoles for monthly 0.2 gph testing: (Magnetostrictive probe)

Parameter	Value
Maximum Tank Size ¹	Up to 30,000 gallons
Software Version	N/A
Minimum Product Level	50 %
Waiting time between filling tank and test start ² (Stabilization time dependant on tank conditions)	6.0 hours
Waiting time between dispensing and test start	3.0 hours
Minimum Test Period ³ . (Test time determined by microprocessor based on tank size and product level)	6.0 hours

1: Monthly and annual testing can only be performed on one tank at a time. If several tanks are manifolded together, an isolation valve will have to be installed so as to separate the tanks individually.

2: There must be no delivery during waiting time.

3: There must be no delivery or dispensing during testing.

Infinity/Continuum 0.1 gph Monitoring Systems

- Critical performance parameters for the **CX 9200, CX 9000,** and **CMX9924** consoles for monthly 0.1 gph testing: (Magnetostrictive probe)

Parameter	Value
Maximum Tank Size ¹	Up to 15,000 gallons
Software Version	N/A
Minimum Product Level	50 %
Waiting time between filling tank and test start ² (Stabilization time dependant on tank conditions)	6.0 hours
Waiting time between dispensing and test start	3.0 hours
Minimum Test Period ³ . (Test time determined by microprocessor based on tank size and product level)	6.0 hours

1: Monthly and annual testing can only be performed on one tank at a time. If several tanks are manifolded together, an isolation valve will have to be installed so as to separate the tanks individually.

2: There must be no delivery during waiting time.

3: There must be no delivery or dispensing during testing.

- All equipment shall be installed, operated and maintained in accordance with procedures specified by Andover Controls Corporation.

This approval will be valid through December 31, 2008, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement unless specified in this document.

Reviewed by: _____

Greg Bareta, P. E.
Engineering Consultant
Bureau of Petroleum Products and Tanks

Approved by: _____ Date: _____