



## Global Nuclear Fuel

A Joint Venture of GE, Toshiba, & Hitachi

### Global Nuclear Fuel

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#### **~~Proprietary Information Notice~~**

This letter forwards ~~proprietary information~~ disclosure in accordance with 10CFR2.390. Upon removal of Attachment 3, the balance of this letter may be made public.

PDO 14-011

April 16, 2014

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Attn: M. Franovich & M. Sykes

Subject: NRC Request for Documents  
References: 1) NRC License SNM-1097, Docket 70-1113

#### **The attachments to this letter contain Global Nuclear Fuel – Americas, L.L.C. Proprietary Information.**

Attached is the documentation that you have requested. Attachment 3 contains proprietary information identified as Global Nuclear Fuel, L.L.C. Company Proprietary Information and should be protected accordingly. It is our understanding that you will either destroy these documents after you have completed your report or protect these documents from disclosure.

1. Moisture Probe Photo
2. Hatch Valve Photo
3. Recycle Moisture Detector Photo
4. Recycle L3 Hatch Valves Vertical View Photo
5. Recycle L3 Closeup of Moisture in Flowmeter Photo
6. Recycle L3 Pressure Transmitter and Local Gage Photo

If you have any questions concerning this letter, please call me at (910) 819-6301.

Sincerely,

Phillip D. Ollis, Licensing Engineer  
Facility Licensing

Commitments: None  
Attachment(s): 1. Affidavit  
2. Kahn Industries, Inc. Manual  
3. Photos

Global Nuclear Fuel - Americas LLC

## AFFIDAVIT

I, **Phillip D. Ollis**, state as follows:

- (1) I am the Licensing Engineer, Licensing & Liabilities, of Global Nuclear Fuel – Americas, LLC (GNF-A), and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in the Attachments of GNF-A's letter, GNF-A letter Number 14-011, Phillip Ollis to Document Control Desk entitled NRC Request for Documents – SIT Inspection. GNF-A text proprietary information in the Attachments, is identified by the statement “GNF Proprietary” or “GNF Proprietary Information.”
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee, GNF-A relies upon the exemption from disclosure set forth in the Freedom of Information Act (FOIA), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for trade secrets (Exemption 4). The material for which exemption from disclosure is here sought also qualifies under the narrower definition of trade secret, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975 F2d 871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704 F2d 1280 (DC Cir. 1983).
- (4) The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. Some examples of categories of information that fit into the definition of proprietary information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GNF-A's competitors without license from GNF-A constitutes a competitive economic advantage over GNF-A and/or other companies.
  - b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to the NRC in confidence. The information is of a sort customarily held in confidence by GNF-A, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GNF-A, not been disclosed publicly, and not been made available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary and/or confidentiality agreements that provide for maintaining the information in confidence. The initial designation of this information as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure are as set forth in the following paragraphs (6) and (7).
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, who is the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or who is the person most likely to be subject to the terms under which it was licensed to GNF-A. Access to such documents within GNF-A is limited to a “need to know” basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist, or other equivalent authority for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GNF-A are limited



**EASIDEW 2-WIRE TRANSMITTER  
with Current Source Output**

**INSTALLATION, OPERATION AND  
MAINTENANCE MANUAL**

Issue November 2006

**KAHN INSTRUMENTS, INC.**

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## **EASIDEW TRANSMITTER**

The EASIDEW Transmitter is a continuous on-line 4-20mA transmitter for the measurement of moisture content in air and other non-corrosive gases.

Key features are:

- Operating range -100 to +20 °C dewpoint
- Operating pressure range up to 5000 PSIG
- Powered by any dc source from 12 to 28 volts
- Linear 4 - 20mA signal
- 2-wire or 3-wire operation
- Backward-compatible with existing EASIDEW TRANSMITTER
- Output configurable for dewpoint or ppm(v)

## **FACTORY CALIBRATION**

EASIDEW is fully factory-tested and calibrated prior to delivery and is supplied with its own Calibration Certificate, providing direct traceability to the National Institute of Standards and Technology. The sensor is certified at thirteen dewpoint levels across its operating range against a certified reference hygrometer, using a mass-flow humidity generator system as a source of reference calibration gas.

Periodic recalibration is recommended in order to maintain the highest quality of measurement in your application. Kahn recommends that you have your EASIDEW Transmitter recalibrated annually, unless it is used in a mission-critical application or in a dirty or contaminated environment, in which case the calibration interval should be reduced accordingly. Kahn can offer a variety of re-calibration and exchange sensor programs to suit your specific needs. We will be pleased to provide detailed, custom advice.

## PREPARATION FOR USE

On delivery, please check that all the following standard components are present in the packing box:

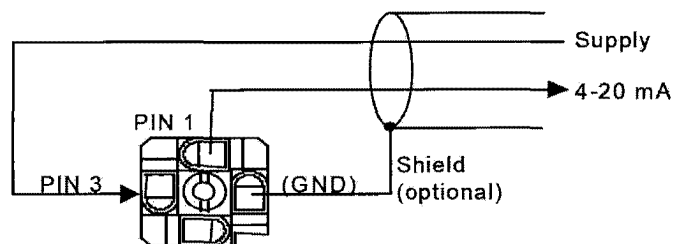
- i) EASIDEW Transmitter
- ii) Sensor Seal
- iii) Certificate of Calibration
- iv) Connector

The sensor is protected with the main packaging while in transit by the inclusion of a small red cap covering the sensor connector, and a small desiccant capsule installed inside of the plastic protective cover. Neither of these items is required for the operation of the sensor.

### Sensor Cable (available as an option from Kahn Instruments)

Connection to the sensor is made via the removable connector, whereby removing the central screw enables the terminal block to be removed by using a small screwdriver. Caution: When removing the central screw ensure that the small sealing O-ring is retained on the screw and is present during re-installation. When reinstalling the connector, and to ensure that full ingress protection is achieved, the securing screw must be tightened to a minimum torque setting of 2.5 lbs/in. The sensor cable used must be minimum diameter of .181 inch to maintain the ingress protect. The diagram below shows the identity of the terminals.

2 wire connection. View showing rear of connector terminal block



When replacing a 3wire sensor with a 2wire sensor, NO changes to the wiring configurations are required. See specification listing for cable details.

## Easidew Transmitter Installation

Just prior to installation of the Transmitter, unscrew and remove the protective plastic cover and retain for future use. Take care to prevent any contamination of the Transmitter before installation (only handle the HDPE guard by the black part).

The Easidew can be mounted in to either a flow-through sensor sample block (optional extra) or directly inserted into a pipe or duct and can be operated at pressures up to 5000 PSIG when used with the bonded seal provided.

**NOTE:** Place the bonded seal over the 5/8"-18 UNF mounting thread and assemble into the sampling location **by hand** using the wrench flats only. **DO NOT grip and twist the sensor cover when installing the sensor.** When installed, fully tighten using a wrench until the bonded seal is fully compressed and to a minimum torque of 22.50 ft lbs.

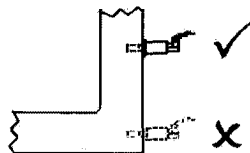
The recommended gas flow rate when mounted in the (optional) sampling block is 2 to 10 SCFH. However, for direct insertion applications, gas flow can be from static to 30 feet per second.

## OPERATION

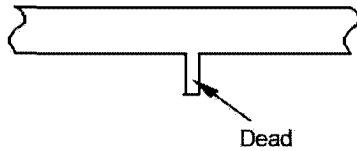
Operation is very simple assuming the following installation techniques are adhered to.

### Sampling Hints

Be Sure the Sample is Representative of the Gas Under Test: The sample point should be as close to the critical measurement point as possible. Also, never sample from the bottom of a pipe as entrained liquids may be drawn into the sensing element.



Minimize Dead Space in Sample Lines: Dead space causes moisture entrapment points, increased system response times and measurement errors, as a result of the trapped moisture being released into the passing sample gas and causing an increase in partial vapor pressure.

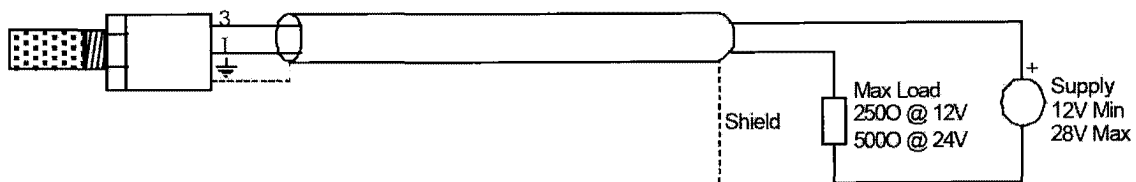


Remove Any Particulate Matter or Oil from the Gas Sample: Particulate matter at high velocity can damage the sensing element and similarly at low velocity, they may "blind" the sensing element and reduce its response speed. If particulate, such as degraded desiccant, pipe scale or rust is present in the sample gas, use an in-line filter.

Use High Quality Sample Tube and Fittings: We recommend that wherever possible, stainless steel tubing and fittings should be used. This is particularly important at low dew points since other materials have hygroscopic characteristics and adsorb moisture on the tube walls, slowing down response and in extreme circumstances, giving false readings. For temporary applications, or where stainless steel tubing is not practical, use high quality, thick-walled PTFE tubing.

## ELECTRICAL CONNECTION

### 2 wire connection details



The shield should be connected for optimum performance



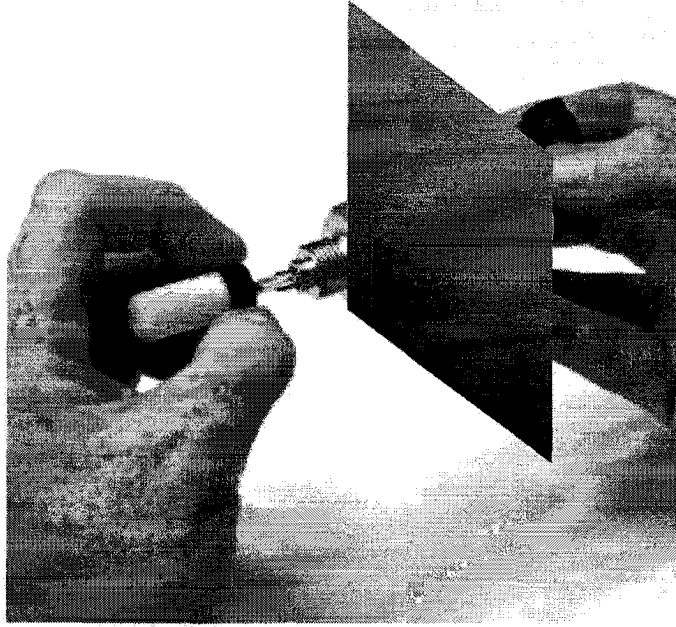
## **MAINTENANCE**

Routine maintenance of the Easidew is confined to regular re-calibration by exposure of the Easidew to sample gases of known moisture content to ensure that the stated accuracy of the Easidew is maintained. Calibration services traceable to the National Institute of Standards and Technology (USA) are provided by Kahn Instruments.

### **HDPE Guard**

The HDPE Guard provides protection to the dewpoint sensor. It is designed to show any contamination and the guard should be changed if the white surface becomes discolored.

When replacing the HDPE guard, care should be taken to handle the guard on the black part only. Replacement guards can be provided. Please contact Kahn.



**APPENDIX 1                      TECHNICAL SPECIFICATIONS**

**Type:** Kahn Ceramic Sensor

**Sensor Torque Loading:** Minimum 22.5 ft-lb

**Calibration range:** -148°F to +68 °F dew point. Extrapolated to -185°F & +86°F dew point.

**Power supply:** 12 to 28 V DC

**Output Range:** 4-20mA over a user settable range of dewpoints and ppm(v), with maximum limits of -186° to +86°F dewpoint and 0 to 3000 ppm(v) respectively. Software to alter the range and error conditions is available from [www.kahn.com](http://www.kahn.com) as a free download.

**Dewpoint accuracy:** +3.6 °F or equivalents, across the whole range

**Gas temperature:** -40° F to +140° F

**Operating environment:** -4° F to +122° F

**Storage temperature:** -40° F to +167° F

**Operating pressure:** 10<sup>-6</sup> Bar a vacuum to 5000 PSIG

**Flow rate:** 2 to 10 SCFH mounted in standard sampling block  
0 to 30 feet/second direct insertion

**Traceable certification:** -103° F to +68 °F dewpoint traceable to NIST  
[For dewpoints <-130°F: Direct reference to a fundamental cooled mirror dewpoint meter]

**Environmental protection:** Water and Dust Ingress Protection is in accordance with standard IEC 60529:2001 and is conformance tested to IP66 in accordance with standard BS EN 60529:1992, and NEMA Type 4 in accordance with standard NEMA 250-2003.

**Weight:** 0.33 lbs

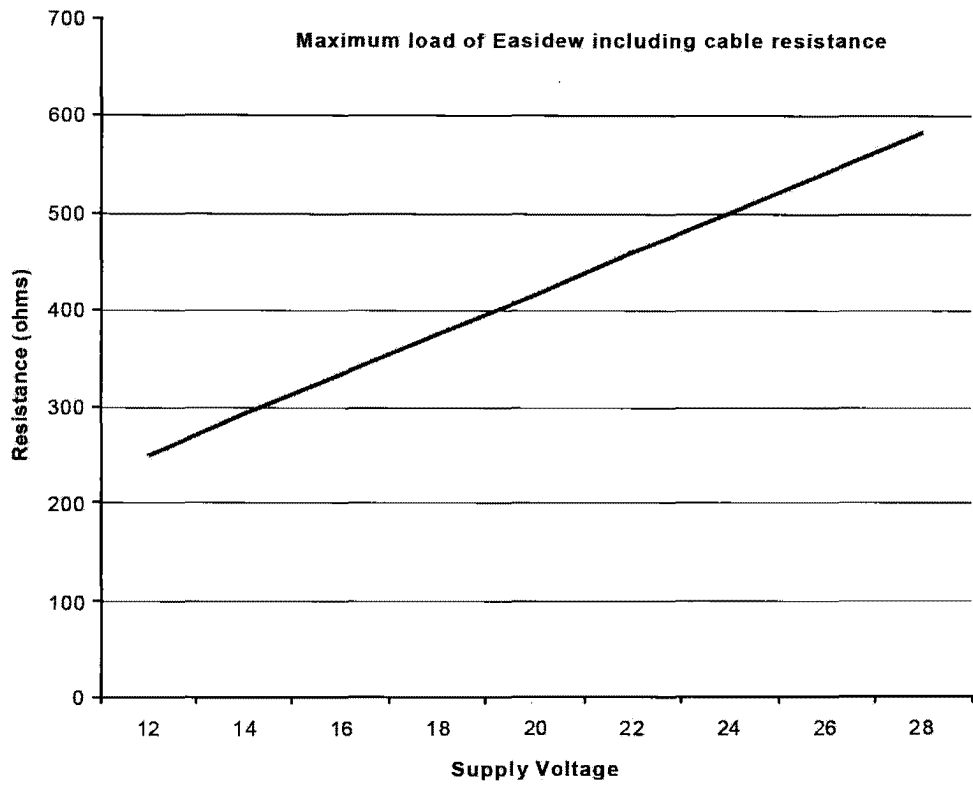
<b>Fault conditions:</b>	<u>Condition</u>	<u>Output</u>	} Factory default
	Sensor fault	3 mA	
	Under range dew point	3 mA	
	Over range dew point	21 mA	

User selectable via configuration software.

**Note:** The current output range and the fault conditions are user programmable. Re-ranging or changing the fault conditions of the Easidew transmitter require the use of a Communications Kit and Configuration Software. Configuration software is accessible using factory set password 7316. Customer may change password after initial access. Contact Kahn Instruments Customer Service Department for details.

**Sensor cable:** Copper braid shielded cable; two stranded 22 AWG tinned copper conductors, minimum OD 0.181 inch, Max length 2600 feet.

**Max. load:** 250  $\Omega$  at 12 V, 500  $\Omega$  at 24 V.



**Dimensions:**

