



**Met One Instruments, Inc.**

## **PETROLEUM REFINERY WEATHER STATION**

**Achieve compliance with new CFR 63 monitoring requirements.**

### **Overview**

Met One Instruments, Inc.'s Petroleum Refinery Weather Stations are specifically designed to comply with the updated CFR part 63 monitoring requirements at petroleum refineries. The stations are available in pre-packaged configurations for fastest delivery, and easily customized with additional sensors and accessories.

The Petroleum Refinery Weather Station includes the highest quality meteorological sensors, all required signal cables and mounting hardware, 10 meter tower or tripod, and a data acquisition system. The system is can be powered by AC or DC power, or an optional solar panel power system. Convenient radio and cellular modem telemetry systems for remote data collection are available.

### **Links to EPA petroleum refinery website and updated CFR 63 pdf:**

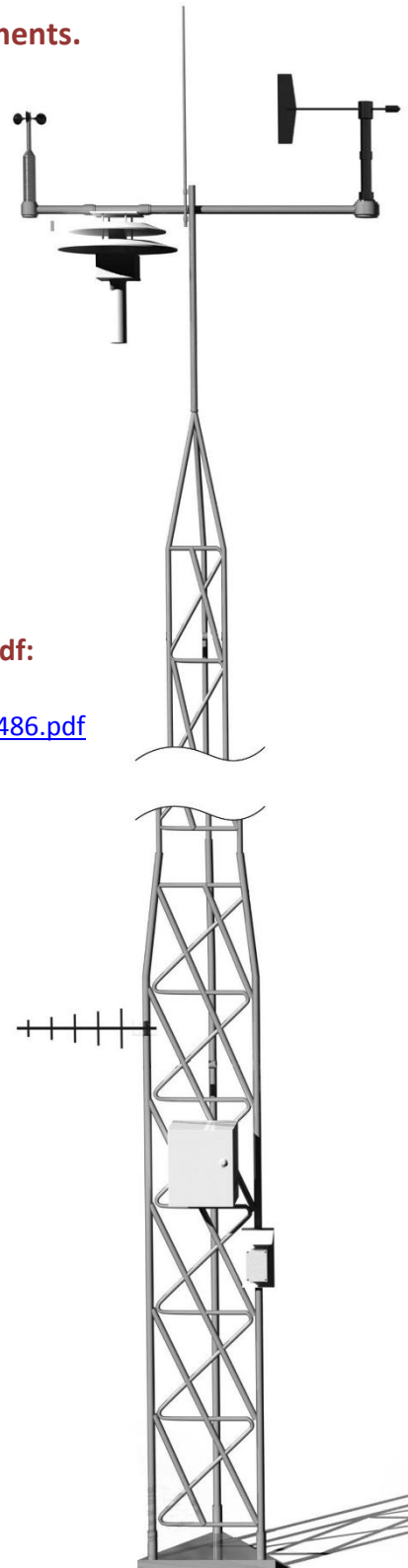
- <http://www3.epa.gov/airtoxics/petref.html>
- <https://www.gpo.gov/fdsys/pkg/FR-2015-12-01/pdf/2015-26486.pdf>

### **Station measurements**

- Wind speed
- Wind direction
- Ambient temperature in aspirated shield
- Barometric pressure
- Relative humidity (option)
- Rain (option)
- Solar radiation (option)
- 2 level delta temperature (option)

### **Benefits and features**

- Complies with new EPA CRF 63 monitoring requirements for petroleum refineries.
- Pre-configured systems for quick shipment
- Low power draw from AC, DC or optional solar power supply
- 10 meter tilt over tower, or 10 meter portable tripod.
- Data logger stores >400 days of hourly data.
- Radio link and cell modem telemetry options for convenient remote data collection.





## PERFORMANCE SPECIFICATIONS:

### STANDARD EPA COMPLIANT SYSTEM:

#### 010C/020C wind speed and direction sensors:

- Wind speed range: 0 to 125 mph
- Wind speed accuracy:  $\pm 1\%$  of reading, or  $\pm 0.15$  mph whichever is greater.
- Wind direction range:  $0^\circ$  to  $360^\circ$
- Wind direction accuracy:  $\pm 3^\circ$
- Starting threshold: 0.4 m/s (0.9 mph)

#### 060A-2 temperature sensor, installed in 076B fan aspirated radiation shield:

- Element: 3 element thermistor
- Range:  $-50^\circ\text{C}$  to  $+50^\circ\text{C}$  ( $-58^\circ\text{F}$  to  $158^\circ\text{F}$ )
- Accuracy:  $\pm 0.10^\circ\text{C}$  ( $0.18^\circ\text{F}$ ) @  $25^\circ\text{C}$
- Resolution:  $0.01^\circ\text{C}$

#### 092 barometric pressure sensor:

- Element: solid state transducer
- Range: 600 to 1100 hPa
- Accuracy:  $\pm 0.35$  hPa ( $+25^\circ\text{C}$ )

#### 970895 10m tower:

- 10m EPA compliant measurement height.
- Tilt over design for easy sensor access.
- Rated for 110mph winds.
- Includes in-ground base.
- Ideal for permanent installations.

#### 580 AutoMet data logger:

- Simple user interface.
- Up to 16 recorded channels of measured and calculated values.
- Digital telemetry outputs.

### OPTIONAL UPGRADES:

#### 083E-0-6 relative humidity (option)

- Element: thin film polymer capacitor
- Range: 0 to 100% RH
- Accuracy:  $\pm 0.8\%$  from 0 to 100% RH
- Resolution: 0.1%

#### 370 rain gauge (option)

- Element: magnetic reed switch
- Orifice: 8.0-in (20.3 cm) diameter
- Accuracy:  $\pm 1\%$  @ 3.0-in per hr
- Resolution: 0.01-in standard (0.2 mm or 0.25 mm optional)

#### 096 solar radiation sensor (option)

- Response: 400-1100 nanometers
- Sensitivity: 8mV/KWatt/m<sup>2</sup> with 100ohm load, approx.
- Linearity: 1% from 0-3000 W/m<sup>2</sup>

#### 910 10m portable tripod (option):

- 10M EPA compliant measurement height.
- Tilt over design for easy sensor access.
- Portable design ideal for temporary fence-line monitoring sites.

#### Solar panel power system (option):

- 120W solar panel and 100Ahr battery for convenient remote operation.

#### Radio telemetry link:

- Up to 20 mile line of sight range for remote data collection.

#### Cell modem telemetry link:

- CDMA or GSM modem, with antennas.
- Cell data plan must be purchased separately from carrier.