



For More Information, Contact:

Patrick Kelly, VP Sales & Marketing
Coastal Environmental Systems, Inc.
820 – 1st Avenue South
Seattle, WA 98134
Pkelly@CoastalEnvironmental.com
www.CoastalEnvironmental.com
206.682.6048 / 800.488.8291

COASTAL ENVIRONMENTAL SYSTEMS, INC.

Now - Even More Coastal Weather Stations at Thule, Greenland!

Seattle, WA: The month of July saw the completion of 4 more FMQ-19 Aviation Weather Station installations by Coastal Environmental Systems. Among the completed sites was Thule Air Force Base, Greenland – which is an augmentation for Coastal's Aviation Systems!

Coastal's aviation stations were first used in Thule in a project Coastal worked jointly with Lockheed-Martin in 1997. The contract was for 7 ZENO[®] Aviation Weather Stations with Taylor heated wind speed and direction sensors; feeding data to real-time Lockheed-Martin software (LEADS). The system replaced a newly installed FMQ-13 and older GMQ-20: the wind sensors in the FMQ-13 could not operate reliably in the harsh environment, and the GMQ-20 was obsolete. Coastal's ZENO[®] Stations, and the Taylor wind sensors, have operated without fail since installation (in fact, the stations survived what was estimated at 200+mph winds a few years back, without mishap – *the estimate comes from damage done to the site – personnel were too busy with other matters to keep watch on the wind speed display!*).

In Thule, where huge icebergs float past with the tides and you can hear the ice rumble and crack like distant thunder, the isolation and extreme climate posed a challenge to Coastal's team during the installation. While working at the Primary Sensor Group one day, Coastal installer, Daniel Smith, reported winds increasing from about fifteen knots, to near fifty knots. "I was glad the temperature was relatively warm (in the high 30's F)," he says. Dan comments on the challenges and alterations made to the system, to account for the harsh environment:

Greenland is administered by Denmark, and we were provided fantastic support from both Greenlandic (Inuit) and Danish contractors during the installation. The Greenland Contractors (referred to as "GC's") exhibited top-notch professionalism and expertise in their work. Some mounting hardware that came with our sensors proved incompatible with the type of tower being used, and the GC's took it upon themselves to fashion for us a custom made mounting hardware kit. It worked perfectly, and helped keep our installation on course....

The only different sensor used there [to account for the environment] was the Taylor wind sensor. The only other significant difference [from previous installations] was that all of our cables at ground level had to be placed in above-ground conduits to keep the "Archies" (Arctic foxes) from chewing on the cables during the long winters.



FMQ-19 Discontinuity Sensor Group
Install, Thule AFB, Greenland

Coastal's newest installation at Thule, is the U.S. Air Force's FMQ-19 Fixed Base Weather System, designed to automate collection of the Air Force's weather data at air bases around the world. Coastal was awarded the contract to manufacture and install the weather systems, as well as provide training and logistics support at 200 air bases across the globe.

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... Thule, CONTINUED

Data from the FMQ-19's sensors are collected by the ZENO[®] 3200, a 32-bit data acquisition system designed specifically for environmental monitoring. ZENOSOFT[®] (the operating system for the ZENO[®]), automatically obtains and disseminates weather data. The FMQ-19 system has an extensive list of sensors.

A complete sensor suite (calculated values in parenthesis) is: wind speed and direction (wind gust), relative humidity, (dew point), temperature, visibility, present weather (answering the question – is it rain or snow, and falling at what rate), total precipitation, cloud height (several layers), presence of ice, detection of lightning and direction (nearby or approaching), (obscuration reporting), (Runway Visual Range (RVR)), barometric pressure and (altimeter setting). Other parameters will be calculated concerning the pressure and winds.

For more information on the FMQ-19 Fixed Base System, please contact Patrick Kelly, VP Sales & Marketing at Coastal Environmental Systems, at: pkelly@coastalenvironmental.com.