

## Mexican Energy Company Chooses Sabik Marine Lanterns to Safely Light the Way



### Background

There are currently 3500 active and decommissioned oil and gas structures standing in the Gulf of Mexico, and Ku-Malooob-Zaap (KMZ) is among the many oil fields in the Gulf of Mexico. It is located 105 km (65.2 mi) northeast of Ciudad del Carmen, Campeche, Mexico and includes five fields: Ku, Maloob, Zaap, Bacab, Lum, and Zazil-Ha.

Petróleos Mexicanos, or PEMEX, is a Mexican state-owned petroleum company, managed and operated by the Mexican government. They operate oil rigs across Mexico and began an 8-year project in 2002 to boost crude oil production at KMZ.





## Challenge

Active oil and gas structures are made of a large network of standing structures interconnected with miles of pipelines. Decommissioned structures either have the entire platform removed or converted into an artificial reef by removing only the upper section. Regardless of an active or decommissioned state, oil and gas structures are a hazard to passing mariners when not properly marked. Structures must be marked with marine lanterns to ensure that they are visible upon approaching the structure from any direction and to avoid a collision from passing vessels.

The current lanterns at KMZ used an incandescent light source, requiring a larger power supply and frequent maintenance. PEMEX identified the need to upgrade the lanterns to operate more efficiently.

The marine lanterns needed to meet the following requirements:

- Be a self-contained solar lantern to sustain a remote location
- Have LED optics for energy efficiency
- Have a visible range of 5 NM set by the Mexican Port Authority
- Include Bluetooth® and Satellite capabilities to easily program and monitor assets.



## Solution

After consulting with the local Sabik Marine distributor, Grupo Insolar SA de CV, PEMEX selected Sabik's M860 Self-contained LED Lantern to safely mark the oil rigs according to IALA recommendations. The M860 lantern uses an LED light source offering a lighter footprint and reduced energy consumption to provide consistent, reliable performance from the incorporated solar power supply. Designed to withstand the harsh elements of the Gulf of Mexico, the polycarbonate lens is UV-resistant, the chassis is powder-coated aluminum, and the lantern has an IP68 rating to prevent water ingress.

The M860 offers a visible range of 4-7 NM and ensures the safety of marine vessels by marking the hazard present at night or during poor visibility conditions. This exceeds the 5 NM criteria set by the Mexican Port Authority.

KMZ is a Class A structure according to the Code of Federal Regulations (CFR) Title 33 Part 67 and necessitates lanterns to meet specific requirements including synchronized flashing of multiple lanterns. Each lantern is fitted with GPS, Bluetooth, and Satellite capabilities. The GPS Synchronization feature allows multiple lanterns to flash in unison.

PEMEX can conveniently configure and check the status of the lanterns from a distance of up to 50 meters by using the Sabik Bluetooth® app on any mobile device. Prior to deployment, the installer can check the status of the lantern by simply tapping the top of the lantern twice.



This “**tap to activate**” functionality will display the settings across the screen located at the top of the lantern giving the customer peace of mind that it is properly set. While GPS enables accurate geolocation, satellite connectivity ensures real-time detailed status reports for advanced monitoring and management within the **LightGuard Monitor** interface.

Both Bluetooth® and Satellite connectivity allows maintenance technicians to check and perform critical maintenance checks on the lights, saving time and reducing maintenance cost.





## Outcome

PEMEX upgraded the lanterns to include all optional features, but the customer was most attracted to the ease of installation and low maintenance of the Sabik's M860 Self-contained LED Lantern. The lanterns are performing well and safely lighting the way for passing vessels.

Because the lanterns have proven to be highly efficient and cost-effective, PEMEX has been gradually upgrading their fleet of lanterns to Sabik Marine's M860 Self-contained Lanterns. There are currently over 200 Sabik lanterns on active and decommissioned oil rigs in the Gulf of Mexico.

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Sabik Marine is not affiliated with Grupo Insular and Petr leos Mexicanos (PEMEX).

