

CASE STUDY

TENGIZ FIELD KAZAKHSTAN

Situation

Deep beneath the western steppe of Kazakhstan near the Caspian Sea lies a giant oil reservoir known as the Tengiz Field. With an oil column measuring 1.6 km across and a surface area more than four times that of Paris, France, Tengiz ranks as the world's deepest producing supergiant oil field and the largest single-trap producing reservoir in the world.



Problem

Oil from the Tengiz Field comes out of the wells at high pressure and contains large amounts of sulfur and other hazardous gases. To better protect well workers and site visitors, the Tengiz Field operator required an emergency warning system capable of integration with gas detection alarm sensors and emitting automatic alert sirens and clear voice safety notifications when the sensors detected harmful gas levels. The system had to be a mix of mobile systems and installations mounted to existing buildings.

Solution

Over 100 **Genasys Protect ACOUSTICS** systems were strategically placed throughout the Tengiz Field. The systems include Genasys 360XT – 3 Stack mobile mass notification systems integrated with gas detection sensors. When dangerous levels of gas are detected, the ACOUSTICS systems automatically activate emergency sirens and broadcast critical safety notifications. The trailer systems can be easily moved to cover different areas.

The installation also includes Genasys ACOUSTICS control cabinets and speakers located on administration, operations and worker housing buildings. A subsequent phase of the Genasys outdoor notification system integrated multiple explosion proof speakers for high-risk field areas. The speakers' components are shielded to prevent electrical activity that could spark a gas explosion.

Genasys Protect

The **Genasys Protect Platform** provides a multi-pronged solution:

- **Genasys Protect ALERT** provides intelligent, location-based, multi-channel mass notification with real-time and modeled data, integrated zoning, automated sensor integration, and even optional integration with outdoor acoustic devices.
- **Genasys Protect EVAC** accelerates emergency response and management by facilitating decision making, cross-agency collaboration, and rapid responses through intelligent, zone-based mapping.
- **Genasys Protect ACOUSTICS** provide highly audible and clear voice messaging when emergencies arise, broadcasting long-range emergency response messaging outdoors, even when connections are down and the power is out.
- **Genasys Protect mobile app** provides a single authoritative source for the public during emergencies through seamless notifications, zone-based maps, and real-time resource information.



Genasys is the only Protective Communications platform that unifies software and hardware to provide geo-targeted alerts to mobile phones and audible warnings and notifications through indoor and outdoor speakers with industry-leading vocal clarity and broadcast area coverage.

Self-contained or easily integrated with existing infrastructure, and featuring solar power, battery backup and satellite connectivity, Genasys ACOUSTICS systems are highly effective in delivering critical communications and life-saving notifications during industrial accidents, HAZMAT incidents, intruder threats, disasters, and other crises.

Genasys: Global Provider of Protective Communications Solutions

Protecting people and property for over 40 years and covering over 100 Million people in more than 100 countries worldwide, including more than 500 cities, counties and states in the U.S., as well as more than half of all California counties.

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