

Bergermeer Gas Storage Terrain monitored by Axis cameras. Thermal cameras for management and security purposes.



Organization:
TAQA Energy B.V.

Location:
Bergermeer, North
Holland, Netherlands

Industry segment:
Utilities

Application:
Safety and security

Axis partners:
Spyke Security,
Agent VI

Mission

TAQA Energy B.V. has been extracting gas from the North Holland Bergermeer terrain ever since the 1970s. The Bergermeer gas field is now nearly empty, but is certainly not useless as the field can now be used to store gas. The field has a porous layer of sandstone at a depth of approximately 2,500 meters. The tiny holes in the sandstone which contained gas for millions of years can be used to safely store gas once more. In order to monitor the terrain, TAQA Energy B.V. hired Spyke Security B.V. to secure the area and also make it possible for the terrain to be managed remotely. Spyke Security chose a nature-friendly solution for the area, namely camera protection - more specifically, thermal camera protection. This camera makes it possible to detect and image objects in perfect darkness as well as mist and other forms of precipitation.

Solution

The company chose a complete Axis camera installation, including four thermal cameras and one HD camera with infrared capabilities.

This allows the company to create images of any objects detected at any time of day and under any weather conditions. The HD camera with infrared capabilities is on a swivel mount meaning it can scan in every direction using the pan and tilt functions. This camera complements the thermal cameras on site. Every camera contains intelligent software by Agent VI, which enables video content analysis (VCA).

Result

The company is pleased with the camera security, initiated in June of 2010, on the gas storage terrain in the Bergermeer. The gas storage terrain is located in a remote section which means a continuous stream of information using live camera images is very useful. The cameras are intended to both protect and manage the area. This means that TAQA Energy B.V. can also view the terrain where the engineers or subcontractors are currently working by entering a secure log-in code on the Internet. Spyke Security only views the area with the cameras for security purposes.

"Because the cameras provide images of the entire terrain, we do not need to physically patrol it at set times for security purposes. The same applies with regard to TAQA Energy B.V.'s management aims. We would like to offer this system to other TAQA Energy B.V. terrains, too."

René den Dekker, Director of Spyke Security.

TAQA Energy B.V. is part of the Abu Dhabi National Energy Company PJSC (TAQA), an energy company that operates on a global level. TAQA's activities include detecting and producing oil and gas, generating energy and desalinating sea water. In the Netherlands, TAQA B.V. works on exploration, production and the transportation of oil and gas. TAQA Energy B.V. additionally manages the Piek Gas Installation in Alkmaar. In the 1960s, the Netherlands found gas not only in Slochteren, Groningen but also in Bergermeer. TAQA Energy is one of the parties to have extracted gas from this location and from other locations in the region. At the end of the 1990s, TAQA began storing gas in the gas field under Alkmaar. The new gas storage capability under Bergermeer will become one of Europe's largest gas storage facilities and has an initial working volume of approximately four billion meters cubed of gas.

The company chose camera security to manage this remote terrain from a distance. "This way we can monitor the terrain where needed from a distance and keep an eye on the presence of maintenance mechanics, for example. We can additionally react swiftly to unrecognized visitors. If the cameras perceive an abnormal situation, they send a signal to the Spyke Security communications center. Someone is then sent to check the situation out," says Peter van der Sman, TAQA Public Relations Manager, Energy B.V. Alkmaar Region.

The gas storage terrain is located in the middle of the polder in a pasture, which means that, due to environmental guidelines, no one may place light towers in the area. This is connected to preventing the destruction of the skyline. The company were also not allowed to fence the terrain off due to the wading birds that so often frequent this area. Fences approximately 2 meters in length could disturb the waders.

Moreover, the gas storage area is underground, whereby nothing of the gas storage area can be seen above ground level. These are the chief reasons for choosing camera security. Because Spyke Security makes frequent use of Axis cameras, they knew they could trust Axis for this project as well.

AXIS Q1910-E and AXIS Q1755

The company installed a total of 5 Axis network cameras. René den Dekker, director of Spyke Security, the company that manages and mans the Surveillance Headquarters and is also responsible for the system: "This installation uses four AXIS Q1910-E Thermal Network Cameras. They are thermal network cameras that can deliver images even in perfect darkness and over a large distance through detection based on temperature sensitivity. In addition to the thermal cameras we have supplemented with one HD camera with infrared capabilities - the AXIS Q1755 Network Camera." The thermal cameras work both during the day and at night and send a signal so the HD camera can see details of objects that occur in a certain range by using the joystick controls. These cameras are fitted with intelligent software by Agent VI, which enables video content analysis.

Viewing the images

The images, as well as the TAQA Energy B.V. terrain that Spyke Security B.V. monitors, are viewed in full screen format in the Boekelermeer Surveillance Headquarters. The software raises the alarm where necessary and includes an image of what provoked the alarm. Users can also call up other images using the intelligent software. The images are analyzed and suspect images are sent through to mobile surveillance, who respond in a physical sense. The images are stored for seven days so they are safely stored to act as legal evidence if needed.

