

## HYDROCARBON PIPELINES

### 1. Pipeline Leak Detection

Pipeline companies install oil collection containments in sensitive locations along the pipeline (e.g. near rivers and/or groundwater drinking wells) for oil leakage monitoring. When an ID-223 Oil Sheen Detector installed in such a containment detects oil or oil on water, it sets off an alarm in a remote location. The ID-223 Detector may be installed in unmanned remote locations where power and communication lines are seldom available. In such cases the system can be powered by solar panels, and communication can be done via wireless communication.

### 2. Pumping Station Monitoring

Most pipeline pumping stations have either oil-water separators or retention tanks for collecting oil spills, as well as storm water run-offs which may carry oil. Water is continuously discharged from the separator directly into the local public drainage system through a sump.



Monitoring in an Unmanned Pumping Station

An ID-223 Oil Sheen Detector is installed near the separator outlet or in the sump to continuously monitor the water discharge. If an oil sheen is detected, an alarm is triggered, the water outlet valve is automatically closed or the water pump can be turned off by the Leakwise sensor.

An ID-225 Oil Layer Thickness Monitor can be installed in the separator to monitor the thickness of the accumulated oil layer. This is especially important in unmanned locations since it will trigger an alarm in the pipeline control center in case of large spills or leaks. It can prevent the costly removal of oily water before enough oil has accumulated in the separator.

### 3. Emergency Shut-off Station Monitoring

Many shut-off valves are built along the pipeline for emergency and maintenance purposes. In some areas, due to certain environmental regulations, new shut-off valves must be installed in concrete containment where leaks collect and can be detected. ID-223 Oil Sheen Detectors installed in these containments continuously monitor these unmanned shut-off stations and, in case of oil detection, send an alarm to a remote location.

