Application	Characteristics	MyCelx Oily Water & Air Treatment Solution
Produced water from oil and gas wells	• Oil content in the produced water ranges from 100 - 30,000 ppm • Water cannot be discharged or re-injected under such high oil loading conditions	• Oil in water removal to 0 - 10 ppm • Treated water can be used for reinjection, evaporation, or recycled through desalination
Wash water from fuel loading/unloading terminals	• Oil product spills into the berms during unloading/loading operations • During washing operations or rain events, water contains higher than regulated oil content allowed for discharge into the sewer or recycle	• Oil in water removal to 0 - 10 ppm, which can be directly discharged into the sewer per local regulations, or recycled and reused
Wash water from pipeline maintenance	• Oil products attached to the pipe surfaces wash off in pressure wash water during standard pipeline maintenance and cleaning operations • The wash water will contain high oil content and cannot be discharged or recycled without oil removal	• Oil in water removal to 0 - 10 ppm, which can be directly discharged into the sewer per local regulations, or recycled and reused
Petrochemicals process waste water	• Complex oil and hydrocarbon laden water is generated during isomerization and cracking processes • Oil loading can range from 50 ppm – 50,000 ppm • Even though the volume of water generated is low, entrainment of this process wastewater into common wastewater results in the following: hazardous water treatment/recycle process, maintenance intensive, fouling issues, high operating costs • More economically viable to treat at the source	• Oil in water removal to 0 - 10 ppm, which can be safely discharged or mixed with other process water, and treated to discharge or recycle, resulting in low operating and maintenance costs • Reduces the load on clarifiers, reducing fouling on multimedia filters and membrane polishers
Petrochemicals oily waste water – wash water, rain water, storm water	• Produces intermittent hazardous slugs of oil and solids • High flow capacity requirement in the order of 2000 - 10,000 gpm makes most treatment systems non-viable • Oil and solids loading will be in the range of 300 ppm - 500 ppm • Due to hazardous nature of the oil/product, less than 1 ppm oil content in the discharge water is required per regulations	• Oil in water removal to less than 0.5 ppm, which can be safely discharged to rivers, lakes, or seas • The treatment system footprint is small and economically viable to implement
Water from fire fighting test centers	• Huge volumes of water are utilized for firefighting test drills • Used water contains high diesel fuel content along with soot and firefighting foams • Water that is normally hauled away or recycled contains very high oil content • Common in oil & gas, petroleum industrial complexes, and state government sites	• Oil in water removal to 0 - 10 ppm, which can be safely discharged or recycled

Application	Characteristics	MyCelx Oily Water & Air Treatment Solution
Boiler condensate polishing for recycle and blow down	• Oil entrainment in boiler condensate is a safety hazard to the process causing fouling issues and process shut down for maintenance • The contaminated water is normally blown down for fresh water make up • Even 2 ppm oil contamination is not acceptable in the boiler • The challenge is to recycle and recover the contaminated condensate water with minimal energy and maintenance costs	• Oil in water removal to 1 ppm, which can be recycled back to the process with minimal pressure. Will also prevent any oil contamination induced fouling in the process • Result in huge savings
Process water make up or intake	• Oil or hydrocarbon contamination is common in ground water and waterways due to spills • Oil entrainment in the water intake to the process causes fouling of the reverse osmosis or ion exchange resins • It may occur intermittently, but will cause high maintenance and permanent fouling of the membranes or resins	• Oil in water removal to 1 ppm • Protects the process against any intermittent hydrocarbon contamination in the water intake • Results in huge savings
Drain water inserts	• Wash water and blow down are drained into the sewer or central wastewater treatment facilities • Drain water from various sources adds to the complexity of wastewater, resulting in high wastewater treatment plant operating costs	• MyCelx oil removal rain inserts produce oil in water removal to less than 50 ppm • Enables direct sewer discharge and lower water treatment costs • Enable simpler water recycling scheme
Pneumatic air supply to instrumentation and controls	• Oil mist in compressed air supply causes failure of pneumatic control instrumentation systems and leads to expensive process maintenance and poor product quality • Oil mist coalescers in standard pneumatic regulators cannot handle fine oily mists • Pneumatic instrumentation and controls generally cannot tolerate incompressible fluids in the air	• Oil free air to the instrumentation and controls at all times • Simple installation, small size, and less than 1 psi pressure drop
Compressed air intake and exhaust	• Oil mists are generated in the process air either at the compressors or from the air intake • Source reduction of oil entrainment in air ensures high product and process quality at lower costs	• MyCelx oil mist removal filters mist membranes remove oil/hydrocarbon contamination when deployed in the compressed air intake or exhaust