

## GDT Process Critical to 16 MGD Siberian Water Treatment Plant

The 2,500 m<sup>3</sup>/h (16 MGD) water treatment plant for the City Kogalym, Russia was put in operation during October 2002. Kogalym, a 3.5 hour flight east of Moscow is planned to expand to over 50,000 residents to support oil field development in Siberia.

CUEKS Ltd., an Estonian “design-build” construction firm was awarded the development project including the treatment plant, storage reservoirs and distribution system. The water source is ground water from 16 different wells. All wells have low pH and contain high levels of iron, manganese, TOC and methane. Mr. Johannes Sutt, formerly General Manager of the Tallinn, Estonia water treatment plant that utilizes a 1,000 ppd ozone system was retained to develop the treatment train process plan for this difficult water.

A two year pilot study to optimize oxidant type and filtration regime determined that the patented GDT™ process would be used for gas - liquid mass transfer to oxidize iron and manganese and for stripping to reduce CO<sub>2</sub> (raising pH), TOC (foam fractionation) and methane prior to two (2) stages of sand/anthracite filtration.



The pressurized five train GDT™ system pictured utilizes high efficiency Mazzei® model 12094 injectors to aspirate ambient air for oxidation. After leaving the 316 L stainless steel injector, the two-phase flow immediately enters the patented DS-1200-316 degas separator for additional mixing and entrained gas and foam removal. The GDT™ process provides tight residual oxygen control and short detention time determined to best supported floc development prior to filtration.

GDT Corporation also supplies ozone and aeration systems for aquaculture, agricultural wastewater, bottled water, pool, industrial and food processing applications. For more information visit GDT Corporation at [www.gdt-h2o.com](http://www.gdt-h2o.com) on the web or at 623-587-1511 (fax).