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## **"AEROS" Airborne Robotic Oil Spill Recovery System**

by Tomasz Kaminski

For a long time crude oil is transported by tankers around the globe. Despite the fact that tankers and oil rigs are constantly improved, big scale offshore oil spill disasters continue to occur. According to the International Tanker Owners' Pollution Federation (ITOPF), there were, on average, 16.5 oil spills per year between 7 and 700 tonnes, and 3.7 oil spills per year larger than 700 tonnes leakage during the period 2000 - 2005.

Myron Sullivan II, Chairman, President and CEO of Global Response Group Corporation (GRG), is the founder of the patented "AEROS" Airborne Robotic Oil Spill Recovery System. This completely integrated and automated offshore oil spill rescue and recovery system can be parachute by C-130 Hercules, Lockheed L-100, Russian Antonov or any other heavy drop-load transporter aircraft right to the site of any offshore marine oil spill. After splash-down, the AEROS System is completely controlled by satellite remote sensing / GPS / telemetry systems from the AEROS Command Center located in an aircraft and/or from any place on earth. The AEROS System is able to respond and commence clean-up operations very quickly and efficiently separates and recovers the spilled crude oil from the ocean's surface.

The main component of the AEROS System is the self-propelled AEROS oil spill recovery vehicle called the AEROS "Hydra-Head AUV". This device can very quickly and efficiently separate oil from sea water and pump the recovered oil, via hose, into very large floating oil storage bags (bladders). AEROS can function properly in bad weather conditions also at night with zero visibility. This is a big advantage compared to conventional oil spill response systems that require day light and good visibility. The AEROS System is not affected by the continual up and down movements due to sea waves. The recovered oil collected in the floating bladders can later be pumped onto auxiliary barges or tankers, depending on the size of the oil spill.

The principle of operation of the AEROS oil-water separation system is based on a controllable pressure differential between the two ends of the many hydrocyclones inside a large high-pressure stainless steel separation chamber. Inside the liquid-liquid hydrocyclones the oil-water intake mixture is constantly spinning at extremely high centrifugal velocity (up to 1,500 times the force of gravity) and, because of the different densities (specific gravities) of the two liquids, the oil and air molecules are squeezed to the central core of the spinning liquids while the water spins to the outer layers. Clean water will flow in one direction and the separated oil spins to the opposite end of each of the separation devices (hydrocyclones). Each AEROS Hydra-Head AUV will have the

ability to process up to 2000 gallons per minute. To respond to a mega oil spill (i.e.: over 10,000,000 gallons) as many as 20 AEROS AUVs can be deployed. This number of AEROS Hydra-Head AUV's would be capable of processing up to 2.4 million gallons per hour of crude oil and sea water.

The GRG AEROS System extremely rapid response capability, combined with the fact that AEROS has been engineered to "win-the-battle" against even the largest of oil spills makes it the ideal system to protect all major oil tanker routes world-wide. GRG plans to establish a global network of 15 AEROS Emergency Response Bases ("ERBs") around the world and according to Sullivan at least eight countries have already expressed serious interest to joint-venture with GRG.



The GRG AEROS System in action: very rapidly contains, recovers, and recycles large offshore oil spills.

GRG plans to use existing military or civilian air bases and existing fleets of C-130 Hercules aircraft (reallocated to the AEROS environmental role) and this reallocation of existing resources can reduce the capital investment cost of the entire AEROS system by over 80%. By implementing the AEROS solution on a global scale, the cost of oil spills will be drastically reduced from current levels and it will also reduce enormously the liability exposure of the oil and oil tanker transport industries as well as the underwriters

insurance industry. The entire AEROS system can literally save the world billions of dollars per year as soon as it is commercially put into operation.

The main advantages of the AEROS System are the extremely rapid response time, much higher oil recovery efficiencies (up to 95% oil recovered versus less than 10% using conventional methods), less clean-up costs (AEROS recovers the spill before it hits the shoreline), recovers and recycles the oil (which then becomes property of GRG, according to international salvage rights), the improved human safety factor, it's high effectiveness (operates day and night), protects marine life and sea birds. In addition implementation of the GRG AEROS System creates useful and prestigious reallocation of military resources and it also will create permanent new employment for thousands of people in both the AEROS ERBs and also in many manufacturing facilities. Last, but not least, billions of dollars can be saved for the world economy.

In addition to oil spill response technologies and turnkey services, GRG owns the exclusive rights to the world's best fire retardant chemical. GRG plans are to use the GRG infrastructure (aircraft, satellites, operating personnel and facilities) to fight forest and brush fires on a global scale. This multi-purpose strategic plan will benefit GRG profitability by increasing the utilization of GRG assets and by providing additional very substantial sources of revenues for GRG and for the Company's joint venture partners.

GRG has already received serious interest from China to create the first GRG AEROS Emergency Base close to the costal industrial city of Tianijn. GRG plans to create an alliance which will joint-venture with each country interested in having an AEROS Emergency Response Base. Such a base would be capable of protecting a surface area of approximately 4000 kilometers in diameter. There are 15 GRG AEROS bases planned world-wide and the approximate time frame to put all the proposed 15 AEROS Bases into operation is approximately 12 - 14 years.

GRG is open for collaboration with any interested country. GRG stock can be purchased through GRG's securities lawyers in Irvine, California and for very large investors GRG can offer a position on the GRG Board of Directors to qualified candidates.

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