



IMPACT **Another PSC Success Story**

World Leading Oil Producer — Tank Cleaning

Cleaning System Protects Workers, Increases Bottom Line.

Sand and sludge build up within production vessels can pose challenges for any oil and gas producer. For the operator, it can be very costly when they are required to shut-down their production to remove this type of waste. Conventional decontamination requires that the vessels be completely de-inventoried and isolated to ensure the safety of personnel entering the confined space, and to eliminate the potential for a spill. When vessels contain Naturally Occurring Radioactive Materials (NORM), the routine task of cleaning is particularly hazardous for maintenance workers and dramatically multiplies the cost of disposal. Fortunately, new technologies exist that can minimize the risk of radioactive exposure, while at the same time, delivering significant time savings and reduced disposal cost.

Case in point: an upstream oil and gas production facility, operated in the Gulf of Mexico, by one of the world's leading multi-national oil producers. For more than a decade, this major oil producer has contracted PSC to perform tank and vessel cleaning maintenance using conventional decontamination methods. This requires that PSC personnel remove large man-way covers and enter the tank or vessel

to remove the sand and sludge build up. Not only was working in such confined spaces physically dangerous, but exposure to NORM posed long-term health hazards as well.

In 2010, PSC assisted in developing a prototype "Zero Entry" vessel cleaning unit. In Q4 of 2011, the process was revamped utilizing very aggressive multi-directional, high-impact nozzles and dual-phase separation specifically designed for the process. Today, the Rhino Production System Cleaner (RPSC), allows for the removal of sludge and sands without entry into the vessel. "Zero Entry" is achievable! Exposure to NORM is eliminated, as is the opportunity for physical injury while performing vessel cleaning maintenance. Actual overall project cost utilizing the RPSC unit versus conventional cleaning will be similar; however, actual time spent on the site can be significantly less. The added benefit of a reduction of waste going to disposal can be dramatic.

To date, the RPSC technology has indeed delivered the cost savings and operational efficiencies promised. The intangible cost savings of "Zero Entry" is immeasurable.

