REDUCING ENVIRONMENTAL IMPACT AND PETROLEUM DEPENDENCE WITH BIOBASED HYDRAULIC FLUID

RSC ENVIROLOGIC® CASE STUDY WITH AMERICAN PILEDRIVING EQUIPMENT

With regulatory guidelines from the U.S. EPA, Marpol and other environmental organizations, many savvy companies and organizations are turning to alternative solutions for hydraulic fluid to better protect the environment from damage and to better protect themselves as a company from high fines or penalties. Readily biodegradable fluids, one alternative solution, are able to reduce the workplace hazards and environmental risks associated with spills or leaks that can not only tarnish a company's reputation, but also lead to costly remediation involving clean-up, potential regulatory fines and equipment or employee downtime.

RSC ENVIROLOGIC HYDRAULIC FLUIDS CAN SAVE OPERATORS THOUSANDS OF DOLLARS OVER THE LIFE OF EQUIPMENT BY BETTER LUBRICANT PERFORMANCE AND REDUCING POTENTIAL SPILL FINES, OIL CLEAN-UP COSTS AND DOWNTIME.

BACKGROUND

American Piledriving Equipment Company (APE) was founded in the 1990s and is one of the leading providers of deep foundation construction equipment in the industry. With headquarters in Kent, Washington, the company has 10 locations throughout the U.S., Canada, Brazil and China, along with distributors worldwide. APE professionals are involved with their customers from the design stages all the way through production and installation on-site. With direct contact with the end user, APE is able to custom design their equipment to meet the specific needs of their

customers and spread product expertise and knowledge straight to the customer.

Most of APE's equipment is used in marine environments to assist in the construction of bridges, piers and wharfs. The company's specialty is using vibratory drivers and extractors to drive or extract pipes, sheet piles and various other pile profiles into or out of the ground. Their method of shaking piles helps reduce resistance, making jobs easier with quicker efficiency, and provides an alternative with less noise pollution and less impact on the environment.

CHALLENGE

Spurred by a project in Prudhoe Bay, Alaska, one of the most pristine environments in the world with strict environmental regulations, APE began exploring alternative solutions for lubricants. According to APE, there were several initiatives in Europe at the time to utilize vegetable oil as a base fluid for lubricants. In 1992, APE made the decision to move to vegetable-based oil in all their equipment and never looked back.

There were, however, several obstacles to overcome. The first was the performance of the fluids. Early vegetable-based products did not offer long-term protection for heavy-duty applications, broke down rapidly due to the temperature at which a vibro-hammer worked and had to be changed out more frequently than conventional petroleum-based products. As they continued searching for suppliers of biobased lubricants and fluids, they also found that some so-called biobased fluids did not meet their environmental requirements and were in limited supply.

SOLUTION

In 1998, APE partnered with Terresolve Technologies, Ltd. - now RSC Bio Solutions. Since then, APE and RSC Bio Solutions have expanded the utilization of readily biodegradable*, biobased products to include hydraulic fluids, degreasers, gear oils and other functional fluids. The main product APE started using in their systems to alleviate the threat of oil spills on the job was RSC EnviroLogic® HF 46† from RSC Bio Solutions.

APE claims to be the first user of biobased hydraulic oil and the largest user of readily biodegradable, biobased hydraulic oil in the U.S. All of the company's rental fleet operates on biobased oil, and all power units are specifically designed to hold an extra spare tank to replenish the main tank should a spill occur. RSC EnviroLogic use is covered under new equipment warranties giving APE's customers peace of mind to continue operating with readily biodegradable hydraulic oil.

"Accidents happen. Hoses can break or leak on any given day. We were not willing to be responsible for that risk and so we turned to a biobased solution for our hydraulic fluids. We have had outstanding service from RSC Bio Solutions and are extremely satisfied with the nationwide scale of product distribution they have provided us over the years."

- Dan Collins, President of APE

*ASTM 5864 and ASTM D7373 compliant

†Previously EnviroLogic® 146 Hydraulic Fluid

RESULTS

EnviroLogic hydraulic fluids can save operators thousands of dollars over the life of equipment by better lubricant performance and reducing potential spill fines, oil clean-up costs and downtime. Utilizing readily biodegradable products has helped the environments where APE products are used because they break down quickly with a reduced impact on the environment and also reduce dependence on petroleum.

ABOUT RSC ENVIROLOGIC® HF SERIES†

Formulated from readily biodegradable, low toxicity base stocks that afford exceptional oxidation and thermal properties, the RSC EnviroLogic HF Series is ideal for hydraulic systems operating in environmentally sensitive areas. The fluids exhibit enhanced wear protection, cleanliness and longer life than conventional petroleum hydraulic oils. RSC EnviroLogic HF Series fluids can directly replace petroleum oil based hydraulic fluids, yet has reduced environmental impact in the event of a leak or spill because they are readily biodegradable, low toxicity and not bioaccumulative.

RSC EnviroLogic HF 46†† is a readily biodegradable ISO 46 grade hydraulic oil for use in conventional hydraulic applications. RSC EnviroLogic HF 46 is based on natural ester technology. RSC EnviroLogic HF 46 exceeds the requirements of many petroleum oil-based hydraulic fluids and has excellent anti-wear and extreme pressure characteristics.

†Previously EnviroLogic® 100 Series

††Previously EnviroLogic® 146 Hydraulic Fluid

For more information about RSC Bio Solutions, visit us at rscbio.com or call +1 704.684.6100.

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