



# 2005 Award Winner

## DynMcDermott Petroleum Operations Company

Since 1993, DynMcDermott Petroleum Operations Company has operated and maintained the U.S. Strategic Petroleum Reserve (SPR), a cache of up to 700 million barrels of crude oil. The U.S. Department of Energy's (DOE) oil reserve was designed as "energy insurance" against disruptions to the availability of crude oil.

With a budget for 2006 of \$113 million and just over 500 employees in Louisiana, Texas, and Mississippi, DynMcDermott works exclusively for DOE. DynMcDermott is the only Louisiana company to have received the Baldrige-based Louisiana Performance Excellence Award three times. Additionally, the Big Hill site was the recipient of the 2005 Texas Award for Performance Excellence, a Baldrige-based award process.

## Ready to Operate

The SPR stores 700 million barrels of crude oil in 62 underground salt caverns at sites along the U.S. gulf coast. These storage caverns, which each hold from about 7 million to 35 million barrels of crude oil, were created by hollowing out salt domes with fresh water injected at high pressure. This approach has won engineering awards for being safer and less expensive than other large-scale above ground storage methods, and it is considered a global benchmark studied by other countries.



## Highlights

- DynMcDermott is the SPR's longest-running management and operations contractor in the reserve's 30-year history.
- Drawdown readiness has steadily improved from 95 percent in 1999 to 99 percent or better from 2002 through 2005.
- Overall customer satisfaction has steadily improved from 67 percent satisfaction in 1999 to 85 percent (on a 90 percent scale) in 2005.
- Hurricane Katrina caused DynMcDermott to relocate operations from New Orleans to Beaumont, Texas. Within five days, the SPR began delivering oil to refineries in the Gulf Coast region, which normally get oil from the Gulf of Mexico.

Each of the SPR's storage sites use state-of-the-art automated systems to conduct operations from a central control room and to monitor conditions, including temperature, pressure, and vibration. Each site also has an advanced fire protection system, emergency response personnel and equipment, and specialized security. DynMcDermott routinely updates its oil storage and operations technology to tap the best new technologies, such as using cement lining for brine disposal pipelines to reduce corrosion and erosion.

For DynMcDermott, priority number one is operational readiness. In the event of oil supply interruption, and following an order from the President of the United States, the SPR is poised to distribute crude oil to refineries. Called "Drawdown," this is DynMcDermott's primary mission. Another key process, "Fill," consists of filling the SPR to specified capacities. DynMcDermott conducts oil storage, oil movement, and field-operating functions at the SPR sites in Louisiana and Texas.

Over the past decade, DynMcDermott has continually improved its Operational Readiness System, a strategic planning and organizational tool to ensure the company can both drawdown and fill efficiently, securely, and safely. Each site is run as a separate business unit under the operational control of a Site Director, allowing maximum decision-making capability at the field level.

DynMcDermott's organizational approach has worked well. Drawdown systems availability has sustained a 98 percent or better performance level and has exceeded DOE expectations in each year and at each site since 2001. The drawdown rate has been sustained at the target level since 2000 and met the 2005 DOE drawdown target of 4.4 million barrels per day, while overall distribution capability as a percentage of drawdown rate has been sustained at 153 percent, compared to the DOE goal of 120 percent. Drawdown readiness has steadily improved from 95 percent in 1999 to 99 percent or better from 2002 through 2005, exceeding DOE's target of 95 percent. DynMcDermott has conducted three major drawdown exercises in recent years.

Fulfilling its other major task, in August 2005, DynMcDermott completed a "Fill" of the SPR to its authorized capacity of 700 million barrels as ordered by President Bush following the terrorist event on September 11, 2001.

In 2005, DynMcDermott's response to Hurricanes Katrina and Rita demonstrated the company's operational readiness, emergency planning, and emergency response. Both hurricanes directly impacted several company sites, displacing employees. But, less than five days after Hurricane Katrina hit the Gulf Coast, DynMcDermott restored operations and was able to provide oil to refiners. For example, DynMcDermott's response included re-routing the primary SPR computer networks to a storage site in Louisiana to support the Emergency Operation Center (EOC) in Texas and just a month later, Hurricane Rita forced an EOC evacuation and relocation to a second planned alternate site. During this period, President Bush declared a drawdown from the SPR, an action that has occurred only twice in 30 years. Although the EOC had to be relocated over 200 miles, DynMcDermott made its first drawdown oil delivery just three days after Hurricane Rita.

## Partnership Leads to Success

DynMcDermott has achieved success by aligning its purpose, vision, mission, and values to match those of its customer, DOE. The two organizations hold joint planning and performance reviews and share computer networks and critical information. DynMcDermott's values-based strategic planning process is integrated with the DOE planning process, and DynMcDermott employees are involved in the DOE strategic planning activities.

This close interaction has allowed both DynMcDermott and DOE to continually assess progress, leading to improvements and positive results across the SPR. Since 2001, performance levels have ranged from 4.5 to 5.8 on a 6-point scale. In 2003, DynMcDermott successfully re-competed its DOE contract, which currently runs through 2008 and contains renewal options through 2013.

To further ensure a high-performing and safe organization, DynMcDermott employees are well trained in workplace safety, environmental stewardship, ethical business practices, and management and leadership development. In 2005, DynMcDermott's rate of workdays lost due to injury per 200,000 worker hours was 0.6 compared to the Bureau of Labor Statistics average of 4.8. Overall employee satisfaction increased from 74 percent in 2000 to 83 percent in 2005, which compares favorably to the 43 percent benchmark determined by Business Research Laboratory. (BRL conducts employee satisfaction surveys for about 300 organizations and establishes industry norms.) The percentage of employees agreeing with the statement "I am proud to be associated with DynMcDermott" improved from 74 percent in 2000 to 84 percent in 2005, comparing favorably to the BRL benchmark of 71 percent. Employee understanding of DynMcDermott's mission was in the excellent band in 2005, well above the Society for Human Resources Management norm of 72 percent and the BRL benchmark of 82 percent.

## A Responsible Environment

DynMcDermott's management of the SPR not only must be efficient, it also must be environmentally sound. DynMcDermott is keenly focused on ways to better identify, reduce, and eliminate waste produced by the SPR. Since 2000, DynMcDermott has decreased the SPR's total pounds of hazardous waste from 3,802 to 515 pounds, compared to the DOE goal of 539 pounds. Since 2001, DynMcDermott also has maintained certification with the International Organization for Standardization's ISO 9000:2000 quality management system and the ISO environmental management standards (ISO 14001).

In addition to technology, environmental stewardship requires communication. DynMcDermott meets quarterly with its Environmental Advisory Committee, made up of external members, mainly scientists, technical experts, and community representatives, to discuss and address potential community concerns.

This close eye on the environment has won DynMcDermott many awards, including the 2005 Clean Texas-Cleaner World National Award, the 2005 National Environmental Excellence Award for Best Available Environmental Technology from the National Association of Environmental Professionals, and the 2005 Louisiana Environmental Management Award.

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