

● ENVIRONMENT & SAFETY

# New oil skimmers heading for Cook Inlet

Citizen's Advisory Council says modern high capacity disk skimmers will replace older style skimmers for oil spill contingencies

By **ALAN BAILEY**  
Petroleum News

A new state-of-the-art design of oil skimmer is going to replace some older style skimmers, as part of the arsenal of equipment maintained for responding to any offshore oil spill in Alaska's Cook Inlet, according to the Cook Inlet Regional Citizens' Advisory Council. An article in the council's May newsletter says that the new skimmers, known as disk skimmers, with especially high oil recovery factors, will replace substantially less efficient skimmers known as Transrecs.

By law, all businesses that operate oil tankers or oil facilities in Cook Inlet must

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have contingency plans for dealing with an offshore spill. And those plans require the availability of oil cleanup equipment with rated capacities to handle the volumes of oil that might end up in the waters of the

inlet in the event of a worst-case oil spill scenario.

Skimmers, devices that mechanically skim oil from the water surface, form an essential component of a cleanup kit. And the oil recovery capacity of the skimmers has to be sufficient to meet the requirements of oil spill contingency plans.

## Weir skimmers

Transrec skimmers, for long a mainstay of the spill response industry, rely on a floating oil capture device with a perimeter weir, floated at a level where surrounding oil lying on the water surface will flow over the weir to be pumped into a tank in a support vessel. But tests of Transrec "weir skimmers" have revealed that the fluid recovered into the tank in fact consists of an emulsion, typically containing 80 percent water and just 20 percent oil, the newsletter article said.

Cook Inlet Spill Prevention and Response Inc., or CISPRI, the spill response cooperative that provides spill response services for companies operating in the Cook Inlet, has been looking for some alternative to the relatively inefficient Transrec weir skimmers, the newsletter article says.

A project begun in 2007, involving several Cook Inlet tanker operators and headed by Eric Haugstad, Tesoro Alaska's director of contingency planning and emergency response, set out to find a new efficient skimmer design that would meet spill response standards for Cook Inlet, the article says. Tesoro owns an oil refinery at Nikiski on the Kenai Peninsula and operates some of the tankers that ply the waters of the inlet.

## New disc design

Following tests at an oil spill test tank in New Jersey operated by the Department of the Interior, the Cook Inlet team identified a new type of coated disc skimmer developed by Crucial Inc. as especially effective. This skimmer design can achieve oil recovery rates of more than 70 percent, a recovery level much higher than the 20 percent level of a Transrec, with the

oil being recovered as oil rather than as an oil/water emulsion the article says.

The Crucial skimmer is of a type known as an oleophilic disc skimmer, in which a series of disks coated with material that attracts oil spins in the oil-fouled water. Oil sticks to the oleophilic coating and, as the disks spin, is scraped off for recovery.

## Especially efficient

Haugstad told Petroleum News in a May 21 email that, although disk skimmer designs have been around for many years, the Crucial design is especially efficient. The design involves a coating that increases the effective surface area of the discs, thus enabling the discs to retain high volumes of oil — the Crucial skimmers also have discs with large diameters, thus further increasing the area of disc available for oil collection, he said.

According to the newsletter article, CISPRI has built its own test tank and has successfully tested the new disk skimmers in this tank. And tests in Kachemak Bay, in the southern Kenai Peninsula, to evaluate the operation of the skimmers with different types of oil containment boom system, showed that the skimmers will work especially well with a containment system known as a "Harbor Buster," the newsletter article says.

## Approved

The Alaska Department of Environmental Conservation has approved the new skimmers for use in Alaska and CISPRI has purchased two large 56-disc skimmers for use with its larger response vessels, as well as two 13-disc skimmers for use with two smaller vessels — the coop anticipates decommissioning the Transrec skimmers once appropriate changes have been made to various oil spill response plans, the newsletter article says. Some other small weir skimmers will be retained for use in specific circumstances, Haugstad said. ●

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study, "like any study based on assumptions and economic projections, is inherently limited in its predictive accuracy."

It also said applications to export significant quantities of domestically produced LNG "are a new phenomena with uncertain impacts" and noted that "the market for natural gas has experienced rapid reversals in the past and is again changing rapidly due to economic, technological, and regulatory developments. The market of the future very likely will not resemble the market of today."

Because of those factors, DOE said it intends "to monitor developments that could tend to undermine the public interest in grants of successive applications for exports of domestically produced LNG and, as previously stated, to attach terms and conditions to the authorization in this proceeding and to succeeding LNG export authorizations as are necessary for protection of the public interest." ●

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