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Pipeline System Owners and Operators have Homework and Help

If a pipeline carrying 20,000 barrels of oil per day ruptures near a densely populated area, what paths will the oil travel and how much area will be covered? Owners and operators of U.S. pipeline systems will be required to answer this and other questions for at least half of their pipeline systems as of September 2004. These requirements are mandated by new regulations under the Pipeline Safety Improvement Act, passed in 2002. The new rules require pipeline owners and operators to assess potential effects to “high consequence areas” if a pipeline system segment should leak or fail. High consequence areas are considered populated areas, environmentally sensitive areas, and commercially navigable waterways, where an oil spill would be especially damaging to human health or the environment.

A new environmental modeling tool called OILMAPLAND may help companies determine how a spill in a specific given location could affect high consequence areas. The model, developed by Applied Science Associates, Inc., uses elevation data from the U.S. Geological Survey’s digital elevation model and hydrological information about local waterways to model where, and how far, a potential spill in a given area could flow. OILMAPLAND was designed to be compatible with the geographic information systems already used by

industry to track locations of their pipelines and facilities.

For more information about high consequence areas, visit the U.S. Department of Transportation Office of Pipeline Safety Web site at ops.dot.gov. For more information about OILMAPLAND, visit the Applied Science Associates, Inc. Web site at www.appsci.com.

SONS Oil Spill Drill to Test Preparedness for the “Big One”

Are responders adequately prepared for a catastrophic oil spill like the 1989 *Exxon Valdez* disaster? Every few years, the U.S. Coast Guard (USCG) holds a “Spill of National Significance” (SONS) drill to test preparedness and practices response procedures.

SONS are considered those spills that are so severe, large, or threatening to the public or the environment that they require an extraordinarily complex response and call for more resources than local area responders can provide. Responding to SONS requires the coordination of multiple federal, state, local, and industry responders. Previous SONS exercises have been held in Philadelphia, Pennsylvania; Valdez, Alaska; and New Orleans, Louisiana. This year, California was selected by USCG to host the exercise.

A major portion of California, and possibly Mexico, will be affected by the

About the *Oil DROP*

The *Oil DROP* is a biannual, informal journal of EPA’s Oil Program. The *Oil DROP* seeks to attract a broad audience within the general public, including concerned citizens, students and environmental groups, and highlight current developments related to oil spills. The journal covers oil spills in the United States and throughout the world, and emphasizes the effects these spills have on wildlife and ecosystems. The *Oil DROP* is available on the Oil Program homepage at www.epa.gov/oilspill.

Recent "SONS" in California

Date	Location	Source	Product	Estimated Barrels
11/24/01	Bolinas to Carmel	SS Jacob Luckenbach	bunker fuel	unknown
12/30/00	E. Walker River	tank truck accident	#6 fuel oil	86
2/28/00	Ventura County	tank truck accident	crude oil	143
9/6/99	Eureka	M/V Stuyvesant	bunker fuel	48
11/10/98	Port of Long Beach	M/T Neapolis	crude oil	150

Source: "The OSPR News", Spring 2003 edition, Issue 1, Vol. 10.

2004 SONS exercise. In order to test the preparedness of both regional and national response systems, a simulated spill scenario will overtax the resources of the local area and cause the National Response System to be activated. The multi-day drill will involve setting up command posts, moving and deploying cleanup and containment equipment throughout California, and importing response resources from outside California. The scenario will test multiple oil spill contingency plans, including the State of California's plan; the EPA Region 9 Contingency Plan (which includes the states of Arizona, California, Hawaii, and Nevada, the tribal nations of the Southwest, and the Pacific Islands); the National Contingency Plan; and the international Mexico-U.S. Response Plan.

The 2004 SONS Exercise is sponsored by USCG, the California Department of Fish and Game's Office of Spill Prevention and Response (OSPR), and the American Petroleum Institute (API). For more information, please visit the OSPR Web site at www.dfg.ca.gov/ospr/.

7th International Effects of Oil on Wildlife Conference

Initiated in 1982 by the Tri-State Bird Rescue Research Center, the International Effects of Oil on Wildlife Conference initially brought together a modest number of parties interested in preventing the effects of oil pollution on aquatic wildlife. The conference has since developed into one of the most effective forums for bringing together all interested parties, including biologists, veterinarians, rehabilitators, government wildlife representatives, environmental non-

governmental organizations and other stakeholders.

Prior to expansion of the International Effects of Oil on Wildlife Conference participant base, the conference was hosted exclusively in the United States. However, as a result of growing interest, the conference was, for the first time, held in Europe at the Hamburg Convention Center in Germany on October 14-16, 2003. In addition to attracting a wider spectrum of participants, the location of this year's conference promoted even greater involvement from government and industry representatives, idea sharing, and cooperation. The conference, co-hosted by the International Fund for Animal Welfare and the International Bird Rescue Research Center, was held to promote information exchange on planning, prevention, and response efforts for those working in fields related to oil pollution and its impact on wildlife.

The themes of the 7th International Effects of Oil on Wildlife Conference included:

- The challenges of cooperative cross-border planning and response;
- The problem of chronic oiling; and
- Evaluation and post-release studies.

Program schedule sessions included:

- Resources at risk;
- Planning and preparedness;
- Rehabilitation management and techniques;
- Wildlife response case histories;
- Chronic oiling and prevention; and
- Evaluation and post release.

For more information, please visit the conference web site at www.eowconference.org.

Oil in the Sea

A report issued this year by the National Academy of Science National Research Council, *Oil in the Sea III: Inputs, Fates, and Effects*, estimates that 29 million gallons of petroleum enter North American ocean waters each year as a result of human activities. Nearly 85% comes from land-based runoff, polluted rivers, airplanes, and small boats and jet skis, while less than 8% results from tanker or pipeline spills. Oil exploration and extraction are responsible for only 1% of the petroleum that enters North American ocean waters.

Oil in the Sea III is the third report from the National Academies on this subject, with the last report published in 1985. In addition to updating the previous report, *Oil in the Sea III* proposes a clear methodology for estimating petroleum inputs to the sea and recommends further monitoring and assessment to help prioritize prevention and response efforts. The current report benefitted from more complete information on petroleum releases and their impact on the environment now available from governmental and private databases.

The report discusses petroleum inputs into North American and worldwide marine waters from four major sources: natural seeps and anthropogenic releases that occur during the extraction, transportation, and consumption of petroleum. In addition, the report highlights major findings on each source and discusses their regional variation in North American marine waters. The report did not specifically address inland waters and many non-transportation-related facilities.

Natural seeps, which occur when crude oil seeps into water from geologic strata beneath the sea floor, are often used to identify potential economic reserves of petroleum. They contribute the highest amount of petroleum to the marine environment, accounting for 45% the total annual load to the world's oceans and 60% of the estimated total load into North American waters.

Historically, oil and gas exploration and production of petroleum have represented a significant source of spills. However, improved production technology and safety training have dramatically reduced both blowouts and daily operational spills during the past decade. Today, accidental spills from platforms represent about 1% of petroleum inputs in North American waters and about 3% worldwide.

Releases from petroleum transport amount to less than 4% of petroleum inputs to North American waters and less than 13% worldwide. The major sources of transportation-related spills include pipeline spills, tank vessel spills, operational discharges from cargo washings, and coastal facilities spills. By increasing regulation, phasing out older vessels, and introducing new technology and safety precautions, transportation-related spills have decreased. However, with much of the 23,000 miles of transportation pipeline in the United States over 30 years old, the report recommends further efforts to decrease the likelihood of spills from this source.

Consumption-related inputs, usually from individual car or boat owners, marine vessels, or airplanes, contribute one-third of the total load of petroleum to the sea. This accounts for 85% of the anthropogenic load to North American ocean waters and 70% worldwide. Land

runoff, which contributes to polluted rivers and streams that eventually empty to the sea, is highest near urbanized areas and refineries. In addition, oil runoff from cars and trucks is increased in areas with expanding roads and parking lots to accommodate growing populations. However, regulating and phasing out inefficient two-stroke engines commonly used in recreational vehicles has helped to reduce the amount of oil discharged into the sea and the report recommends that this continues.

Given that study focuses on marine waters, many types of inland non-transportation-related facilities are not directly addressed. The authors only took into account oil spills that occurred directly into marine waters or that occurred within estuarine waters within three miles of the mouth of the estuary. Urban runoff data were based on oil and grease measurements in various rivers. Such measurements would, theoretically, include upstream inputs from vessels, facilities, and pipelines, as well as any urban runoff. However, the study does not provide conclusive information on the relative importance of non-transportation-related facilities – particularly those located on inland waters.

Moreover, although the report provides useful data on the relative contributions of different sources to petroleum inputs to

the sea, such data do not necessarily indicate the severity of individual spills from these same sources. For example, urban runoff may be responsible for more total oil into the marine environment over a decade, but a single tanker spill in a vulnerable location could cause significantly greater environmental and socioeconomic impacts. The same could be said for non-transportation-related facility spills.

Oil in the Sea III was sponsored by the U.S. Minerals Management Service, U.S. Geological Survey, U.S. Department of Energy, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. Coast Guard, U.S. Navy, American Petroleum Institute, and the National Ocean Industries Association. The report can be ordered online at <http://books.nap.edu/catalog/10388.html> or by calling 1-800-624-6242.

Recycling Waste, Creating Oil

A revolutionary new process, thermal depolymerization (TDP), was being tested at the first industrial-sized installation of its kind in Carthage, Missouri. ConAgra Butterball turkey plant was the first facility to use this technology on a large scale. Developed by chief executive of Changing World Technologies, Brian S. Appel, the process involves cooking and pressurizing waste turkey parts to produce a thick liquid that can then be refined into three products: high-quality oil, clean burning gas, or purified minerals that can be used as fuels, fertilizers, or specialty chemicals for manufacturing. The \$20 million facility is capable of grinding up, heating, pressurizing, and processing 200 tons of waste turkey parts and producing roughly 600 barrels of oil daily. As of the end of May 2003, the facility was no longer in the testing phase and had begun production.

Essentially, TDP accelerates the naturally occurring process called subduction. Subduction is the process by which petroleum deposits are created from decomposing, one-celled organisms through the pressure and heat of plate tectonic movement, a process normally



Run-off from petroleum facilities is a primary source of oil in the sea. Photo courtesy USCG

taking hundreds of thousands of years. Unlike other solid-to-liquid-fuel processes, TDP is most like naturally occurring subduction because it accepts almost any carbon-based feedstock. Some examples of feedstock include old computers, old tires, municipal garbage, medical waste, hog manure, and even sewage.

TDP successfully replicates the process of subduction by heating and pressurizing polymers—long chains of hydrogen, oxygen, and carbon-bearing molecules—and creating short-chain petroleum hydrocarbons through a series of steps. Arguably the most attractive element of TDP is that all byproducts from the process are recycled—the water is treated in a municipal water treatment plant, gases are used to generate electricity that run the facility, and the final products, oil and carbon, are sold. On average, the entire process takes about two hours.

While the concept of converting organic solids into liquid fuel using waste products is not a new one, high costs prevented the creation of a process usable on an industrial scale. However, economically-viable TDP has attracted the attention of not only private business, but also the federal government. USEPA awarded a \$5 million grant to help develop the ConAgra plant. Remaining development costs for the \$20 million facility were shared between Changing World Technologies and ConAgra Foods through a partnership to develop the process and advance the commercialization of the technique. Eleven more projects are planned, three of which have received grants totaling \$10 million from the Department of Energy. Projects include: another turkey plant in Colorado, a poultry plant in Alaska, and an onion dehydration plant in Nevada. In all, as of May 2003, private investors contributed a total of \$40 million to the endeavor, while the federal government awarded grants of over \$12 million. This is a seemingly small price to pay for a process that could potentially change the way the world handles waste and energy resources; a process that could even reduce global warming.

Illegal Sludge Discharge at Sea – Bigger Threat than Accidental Spills?

A recent federal crackdown provided evidence that the problem of illegal dumping at sea may be far greater than previously known. In the Pacific Northwest alone, there were seven cases over the past year involving the intentional release of toxic, oily sludge by twenty ships. In Alaska in 2002, Boyang Marine and Boyang Ltd. agreed to pay \$5 million in damages after admitting that their entire 12-ship fleet had hidden illegal discharges for seven years. Their corporate officers had obtained false waste-disposal receipts and ordered engineers to repaint bolts attached to illegal bypass hoses to hide their use. They also instructed a captain and crew to lie to a grand jury. Several corporate managers and directors in South Korea were indicted in this case and are considered fugitives. One chief engineer pleaded guilty this year to discharging 20 tons of oily sludge on one trip from Japan to Vancouver, Washington. In April 2003, a South Korean engineer surrendered to U.S. marshals for pollution charges and another awaited sentencing in Tacoma, Washington. The Department of Justice is investigating additional vessel owners and operators.

These cases have generated millions of dollars in fines and resulted in jail time for one captain and six chief engineers responsible for installing devices to illegally discharge engine room waste into the sea and falsifying records to cover it up. Crewmembers have been ordered to hide evidence, produce phony waste-disposal receipts, and lie to the courts in an effort to cover up the practice of illegal dumping. It is unknown how often such illegal dumping occurs, but investigators say that many incidents go unnoticed. When inspectors find a more reliable way to discover illegal dumping, it may prove to be far more common than accidental spills, and a greater threat to the marine environment.

Cargo and container ships have procedures to follow when disposing of

the waste oil, solvents, and lubricants that collect over time in a ship's engine room. Normally, the water and oil are separated and the oil is stored in a tank as sludge. Some ships burn this sludge in incinerators on the ship. Others store it until the ship reaches port, where it can be disposed of properly. Disposing of the sludge properly can be expensive and time consuming. Instead of following these procedures, disreputable engineers install hoses to bypass pollution-control systems and simply pump the waste overboard.

Vessels are required by international law to track all use of oil in an "oil record book." Investigators can sometimes find evidence of illegal discharge when residual oil is found in places where oil use has not been reported in the book. Other times, they have to rely on luck to catch violators. In an Oregon in 2002, a former crewmember tipped off investigators by e-mail with pictures of an illegal hose system used for dumping waste. In another Washington incident, the Royal Canadian Air Force passed over a ship discharging waste and noticed the oil in its wake.

Oil and oily waste can kill fish, marine mammals, birds and their offspring, and destroy plant life. Even small spills can damage the ecological balance in certain areas and cause long-term harm to the environment and aquatic life. It is difficult to determine exactly how much damage is caused by illegal dumping, partly because it is unknown how much oily waste is being dumped.

A National Academy of Sciences (NAS) study estimated last year that ships worldwide generate 500 million gallons of this sludge. NAS estimates that roughly 5 percent of waste from the largest tankers was discharged illegally and that 15 percent generated by smaller ships was discharged illegally. The study concluded that 65 million gallons is dumped annually. Approximately 6,100 trips are made by commercial shipping vessels in and out of Washington State waters annually, and a large container ship can produce 1,000 gallons of toxic sludge while traveling between Asia and the West Coast.

UK Spill Timeline		Location	Type of Oil Spilled	Suspected Source
2002	Dec. 2002	Lincolnshire Coastline	Old (Weathered)	Sunken Ship
	Dec. 2002	Brayford Pool	Unknown	Unknown
2003	Jan. 2003	Marina in Lincoln	Diesel Fuel	Sunken Cabin Cruiser
	Feb. 2003	Suffolk	Unknown	Leaking Pipeline
	Mar. 2003	Wigtown Bay	Diesel Fuel	Sunken Ship
	May 2003	Blyth Harbor	Fuel Oil	Cargo Ship

Some Washington state inspectors feel the study significantly underestimates the problem. The practice is widespread, they say, because until recently, violators were seldom brought to justice, and rarely served jail time. When interviewed by investigators, crewmembers who have served on multiple ships have reported that illegal dumping is a commonly accepted practice within the industry.

An organization that represents cargo vessels in Washington state waters disagrees. They contend that most companies do not commit these crimes because the risk of fines and loss of reputation is too great. They argue that there is no basis to blame the entire industry for the problem.

Oil Spills off British Coasts

Over a period of just five months from mid-December 2002 through May 2003, England experienced numerous oil spills. The most recent of these spills occurred at a Northumberland port in Blyth Harbor, just east of London. Over a half ton of fuel oil was thought to have leaked from a docked ship. A Chinese-owned cargo ship carrying plywood from Indonesia, which was first spotted by harbor pilots, was suspected to be responsible for the spill. Following containment of the spill, a cleanup operation began that kept mortality rates of birds and fish quite low.

A search began for those responsible who, once found, could face extremely high fines and up to a two-year prison sentence. A Port of Blyth spokesperson indicated that this spill was possibly the largest the port had ever seen.

Two months prior, in March 2003, another oil spill occurred in Wigtown Bay which was thought to have come from a recently sunken thirty-two-foot vessel, the *Solway Hunter*. The boating accident resulted in a large surface-water diesel oil spill close to Ross Bay near Krikkudbright, about 375 miles northwest of London.

In a separate incident in February 2003, thirty swans were taken to a wildlife hospital after being covered with oil from a spill that took place in Suffolk. The spill came from a leaking pipeline at Felixstowe Harbor, about 100 miles northeast of London. The type of oil spilled was unknown.

On January 19, 2003, just one month before the Suffolk spill, animal welfare officials were rescuing swans from a marina in Lincoln to be taken to a wildlife hospital for cleaning after yet another fuel spill in that area. Officers said they had spotted over a dozen contaminated fowl and expected the problem would get worse. This spill consisted of diesel fuel that leaked from a cabin cruiser sunken in Brayford Pool, over 200 miles west of

London. On New Year's Eve 2002, more than 60 swans were rescued from Brayford Pool after they were covered in oil that came from an unknown source.

In mid-December 2002, a spill washed up on the Lincolnshire coastline in the form of spongy oil lumps between Skegness and Mablethorpe, a five-mile coastal stretch over 100 miles north of London. First spotted by people walking along the beach, the discovery followed previous sightings of similar spills in the area earlier that month. The spills along the Lincolnshire coast were initially thought to have been caused by dumping from tankers or to have risen from shipwrecks. Oil samples were laboratory tested to determine if the oil found earlier in the month came from the same source as that found in mid-December. Results showed the oil had been in the water over a long period of time indicating that the oil had most likely emerged from a previously sunken ship or through tank washing. A spokesman from the British Maritime Coastguard Agency (MCA) noted that many hundreds of shipwrecks exist around this part of the Lincolnshire coastline. Due to the heavy weathering of the oil, it was thought that a ship sunk as long ago as World War II could have caused the oil spills in East Anglia. The MCA Shipping Minister explained that

some ships could take up to 60 years to rust and leak out the bunker oil from tanks that fueled the engines of these older ships.

Tasman Spirit Sinks

The *Tasman Spirit*, a single-hulled oil tanker, ran aground in the Arabian Sea off the coast of Karachi, Pakistan, in bad weather and a high monsoon tide on July 27, 2003. The tanker was carrying a cargo of 67,000 tons of Iranian crude oil and was destined for the Pakistan National Shipping Corporation. An estimated 30,000 tons of oil spilled into the sea making it the worst spill on Pakistan's Arabian Sea Coast.

Three attempts to tow the ship away failed. Cracks appeared in the hull of the ship on August 14, 2003, and the tanker broke into two pieces shortly after. About 37,000 tons of oil were salvaged from the ship during a 15-day rescue operation.

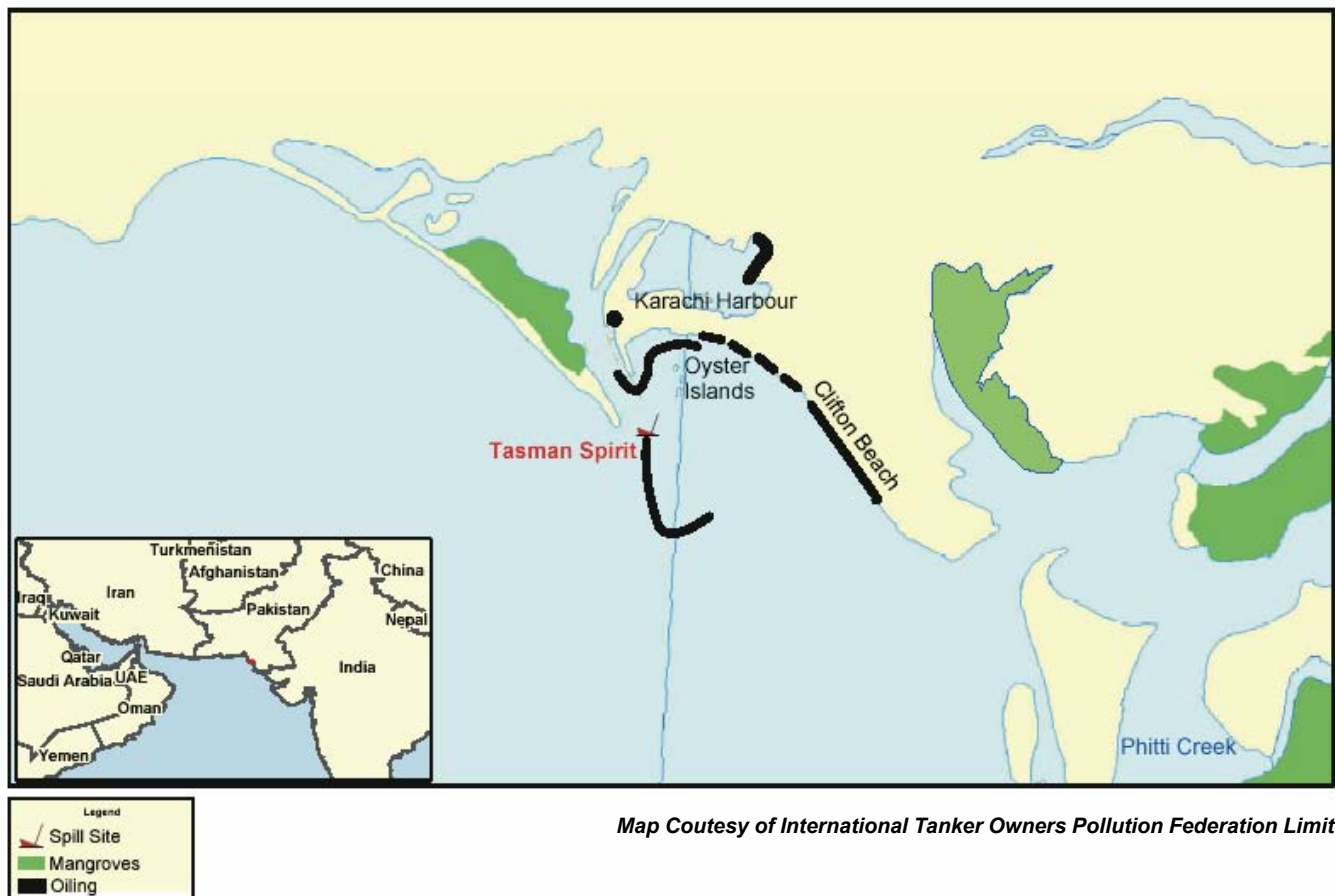
A 7.5 km stretch of coastline endured the worst of the oil spill, and residents have found hundreds of oil-soaked sea animals along the shores. Residents near the beach and adjacent islands have complained of headaches, nausea, and respiratory problems, and many Karachi restaurants have stopped serving seafood.

The spilled crude oil created a film on the water that posed an immediate threat to the foraging grounds of migratory birds and marine life. The oil covered bird breeding grounds and penetrated 30 to 45 cm below the surface. The oil slick posed a threat to sea plankton which are a vital part of the food chain. Truckloads of sand and fish, crabs, and other marine species covered with oil were removed from the nearby beaches. Environmentalists believe it will take months to clean and restore Karachi's beaches now covered with a thick layer of black crude and littered with dead fish, turtles, and sea snakes.

The Karachi Port Trust has lodged a formal complaint with the International Maritime Organization (IMO) and is claiming damages against Polembros, the Greek company who owns the *Tasman Spirit*. Under the International Convention on Civil Liability for Oil Pollution, the owner is liable for damages up to \$3.8 million, plus \$538 for each additional gross ton of oil over 5,000 tons of oil spilled.

The Pakistan National Committee (PNC) of the World Conservation Union (IUCN), at a meeting of 16 member organizations, urged all the Federal and Sindh government agencies and others concerned, to urgently take necessary actions to avert accidents like the *Tasman Spirit* spill in the future and to minimize the impact of this tragedy on human and marine life. After a comprehensive analysis of the situation, the PNC proposed nine specific actions to remedy the current situation and to deal with

Tasman Spirit, Oil Spill Incident, Pakistan, 27 July 2003



similar emergencies in the future. Specific actions include a qualitative assessment of the impact of the oil spill on human and aquatic life, reinstatement of the Marine Pollution Control Board, review and approval of the National Oil Spill Contingency Plan (currently in draft form), creation of a multi-disciplinary Emergency Response Team, and review of existing environmental laws to ensure they protect the marine environment, coastal resources and facilities from pollution.

Tricolor Spill in North Sea

The *Tricolor*, a 50,000 ton vessel carrying nearly 3,000 luxury cars, sank in the English Channel after colliding with a container ship in thick fog on December 14, 2002. About 3,000 gallons of heavy fuel oil leaked from the *Tricolor* creating an oil slick more than 2 miles long and 160 yards wide.

Rough weather hampered efforts to combat the slick at sea and much of the spill broke into segments that drifted toward the Belgium coast. In the days immediately after the collision, hundreds of birds were found dead on the beaches covered in oil, and environmental protection officials believe many more died at sea.

Belgian and Dutch salvage firms have begun cutting up the vessel, but the salvage operation involves a high risk of pollution. The carve-up and removal efforts have been repeatedly delayed due to bad weather conditions. During salvage operations in 2003, the sunken *Tricolor* appeared to leak an additional 80 to 100 tons of heavy oil. Two ships and a reconnaissance aircraft monitored the slick, but there was no immediate danger to the Belgian coast. The salvage company claims it has stopped the leak and the Belgian Coast Guard has declared that the worst appears to be over.

OP-Skimmer

The following announcement does not constitute EPA endorsement or EPA approval of the product described. It is intended only to notify the response community of newly available equipment.

The idea for the OP-Skimmer developed after problems were encountered while collecting spilled oil and garbage during the Gulf War. The OP-Skimmer, manufactured by Rasmussen Enterprise AS, is a self-propelled, self-contained vessel, which collects and transports oil from spills and garbage floating on the water. It was primarily designed for emergency uses, but may be used for day-to-day purposes including harbor maintenance, garbage collecting, and fire fighting.

The skimmer employs a device called a "snail house" that drags surface water (along with oil or other floating objects) into the vessel, where the oil floats on top of the water. Surplus water is pressed out through valves in the bottom of the hull, maintaining sea level. The skimmer is equipped with fire fighting equipment that can also spread oil absorbing materials and chemicals. The OP-Skimmer is easy to use, requiring limited instruction on operation and maintenance procedures from qualified technicians.

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U.S. EPA Oil Program Infoline

The EPA's Oil Program offers a variety of information about oil spill prevention and response through its Internet web site (www.epa.gov/oilspill). This information serves as a resource for businesses that are subject to oil spill regulations, emergency personnel that respond to oil spills, students, teachers, and the general public. One of the most popular features of the web site is the email infoline (www.epa.gov/oilspill/comment.htm or oilinfo@epa.gov). This feature allows the public to contact Oil Program personnel to ask specific questions that may not be answered elsewhere on the web site.

People who do not have access to Internet can reach the infoline voice mail system at 1-800-424-9346.

Oil Program staff and the EPA Call Center respond to approximately 70-90 public inquiries each month. They provide answers to oil facility owners and technical professionals regarding oil spill regulations, offer information to concerned citizens about how to report a suspected spill, provide information on the environmental impacts of oil spills, and respond to requests for data about oil spills.

Examples of typical questions answered through the infoline include:

- What would be an environmentally conscious method of cleaning crude oil from a beach?
- Can you provide or direct me to information on biological oil cleanup agents?
- I am doing a high school science experiment involving oil spills. Can you provide me with examples of how to demonstrate or simulate an oil spill in a classroom laboratory environment?
- How are wildlife oiled during an oil spill incident rehabilitated?
- Is it true that vegetable and cooking oils are also regulated by the EPA?
- What oil regulations apply to transfer facilities? What regulations apply to marinas?
- Does the professional engineer that certifies my facility's Spill Pollution Control and Countermeasures (SPCC) Plan have to be licensed in the state my facility is located in?

Many of the questions submitted to the Oil Program through infoline are from students and teachers seeking information for classroom and science fair projects dealing with oil spills. Oil Program staff are pleased to have the opportunity to respond to questions from interested individuals. Visit the website, send an email, or call the infoline phone number if you have question for the EPA Oil Program.

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