Suggested References:

Introduction to Coastal Habitats and Biological Resources for Oil Spill Response
NOAA / Hazmat

Introduction to Oil Spill Physical and Chemical Processes and Information Management
NOAA / Hazmat

EPA's Oil Program Web site
www.epa.gov/oilspill/

National Response Team
www.nrt.org/

NOAA Hazardous Materials Response and Assessment Division
http://response.restoration.noaa.gov

Oil Spill Intelligence Report's Oil Spill Basics: A Primer for Students
www.cutter.com/osir/primer.htm

Oil in the Sea
National Academy Press, 1985

Document prepared by:
Region IV
Regional Response Team
Co-Chairs:
U.S. Coast Guard 305-536-5651
U.S. EPA 404-562-8721

Oil or Chemical Spill Notification

call the National Response Center at
800-424-8802

Oil Spill Response

in the Region IV Coastal Zone, contact the U.S. Coast Guard Marine Safety Office (MSO):

MSO Wilmington, NC
910-792-8408

MSO Charleston, SC
843-724-7616

MSO Savannah, GA
912-652-4353

MSO Jacksonville, FL
904-247-7310

MSO Miami, FL
305-732-0160

MSO Tampa, FL
813-228-2189

MSO Mobile, AL
334-441-5121

In the Region IV Inland Zone, contact the U.S. Environmental Protection Agency:
404-562-8700

Inland Zone U.S. Coast Guard Offices are:

MSO Huntington, WV
800-253-7465

MSO Louisville, KY
800-253-7465

MSO Paducah, KY
502-442-1621

MSO Memphis, TN
901-544-3912

State Pollution Response Contacts are:

North Carolina
919-733-3867

South Carolina
Spill: 888-481-0125
Office: 803-896-4000

Georgia
404-656-4300

Florida
850-413-9911

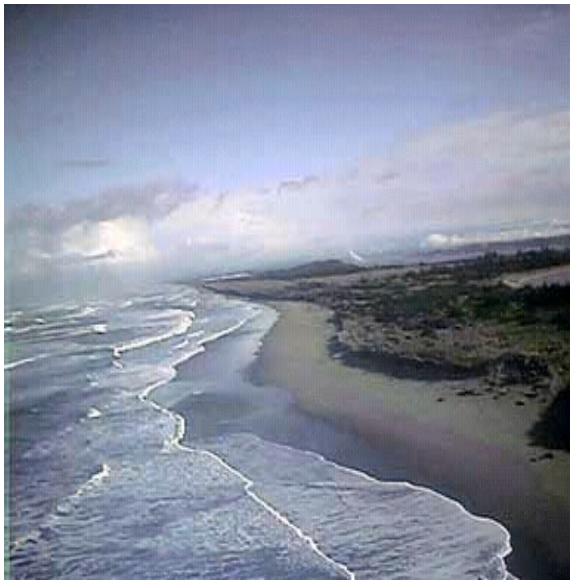
Alabama
334-242-4378

Mississippi
601-352-9100

Tennessee
800-258-3300

Kentucky
800-928-2380

Tar Balls in the Coastal Environment



What Are Tar Balls?
Tar Balls are fragments or lumps of oil weathered to a semi-solid or solid consistency, feel sticky, and are difficult to remove from contaminated surfaces. They are formed through the combining of viscous hydrocarbons with debris that is present in the water column. They range in size from a pinhead to approximately 30 centimeters in diameter.

Where Do They Come From?
The source is generally believed to originate from offshore petroleum production, drilling, onshore bulk oil storage or production facilities, marine transportation discharges which includes vessels pumping bilges and tank cleaning, and from sources such as improper disposal of automotive oil and runoff from storm sewers. However, natural seepage from the ocean floor is also considered a source.

In 1979, the National Oceanic and Atmospheric Administration (NOAA) focused on this issue in a document called " A Review of the Tar Ball Problem". Their findings showed that tar balls originate from three main sources:

- 40 percent from vessels pumping bilges or tank cleaning;
- 11 percent from natural seepage from ocean floors; and
- 49 percent from shoreside facilities, including automotive oils deposited in storm sewers or washed into the sea by rainstorms.

The study further concluded that while in the water, oils undergo a weathering process during which lighter fractions evaporate. The remaining product is a heavy asphalt-like substance which washes up on beaches. This product normally does not pose a serious threat to public health and welfare and to the environment. However, it may create cosmetic, and at times, economic problems.

Why Do You See Them More Often On The East Coast?
Pelagic Tar, commonly called beach tar or tar balls, is a phenomenon which plagues coastlines throughout the world, the United States included. Tar ball concentrations will vary widely from the eastern Gulf of Mexico to the Atlantic Ocean and tend to decrease during the fall and winter months. The likelihood of weathered oil washing ashore on the shores bordering the east portion of the Gulf of Mexico is relatively low unless there is a significant oil spill within the region. Wind and predominately conducive current conditions control the probability and tar balls generally sink to the sea bottom or drift.

The loop current waters from the Straits of Florida up along the east coast flow in close proximity to the southeast coastline. These currents can and do rapidly move high concentrations of weathered oil onshore.

Are They Harmful To You?
Tar Balls are a nuisance. If you walk barefoot on the beach in the impacted areas, you may ultimately find tar residue on your feet. Normally there are no or minimal health concerns associated with tar balls. However, you should remove the tar as soon as practicable from your. As with some heavy oils, prolonged skin contact may cause an allergic reaction. Such a reaction is usually manifested as a skin rash (dermatitis) which is local in most cases. If you are concerned about exposure to tar balls and the occurrence of any rash, a doctor should be consulted.

How Do You Remove Tar From Your Skin?
Rinse the affected area with fresh water, scrape off the excess tar from your skin and apply a grease removing agent (e.g., pastes found in auto stores) or mineral oil. Rinse again with fresh water. In cases where fresh water or a removing agent is not available the bulk of the tar may be removed by rubbing the area with beach sand. DO NOT use gasoline, solvents, or other materials that may be worse to the skin than the existing tar.

Can They Be Removed From The Beaches?
Local governments that have designated clean up crews remove the tar balls when cleaning the beaches. Because of the recurring nature, it is thought that removal is best handled through these routine beach clean up programs.

It is the policy of the state and federal government not expend funds for cleaning up minimal amounts of tar balls from beaches. However, government clean up actions will be taken if tar balls threaten the public health and welfare or the action contemplated will clearly be productive in **returning the environment to its former state if the pollution is in fact ecologically damaging**.