

# **Descriptions of 19 Sites Proposed for the National Priorities List Before October 1992**

Office of Emergency and Remedial Response  
Hazardous Site Evaluation Division (OS-5204G)

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This document consists of descriptions of the 19 sites proposed for the National Priorities List (NPL) before October 1992. Summaries have not been updated since they were first issued but have merely been compiled here into one document as a convenience.

The size of the site is generally indicated, based on information available at the time the site was scored using the Hazard Ranking System. The size may change as additional information is gathered on the sources and extent of contamination.

Sites are arranged alphabetically by State (two-letter abbreviations) and by site name.

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## **CLEANING UP UNDER SUPERFUND**

The Superfund program is managed by the U.S. Environmental Protection Agency (EPA). It is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), enacted on December 11, 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA), enacted on October 17, 1986. In October 1990, SARA was extended to September 30, 1994. The Hazardous Substance Response Trust Fund set up by CERCLA as amended pays the costs not assumed by responsible parties for cleaning up hazardous waste sites or emergencies that threaten public health, welfare, or the environment; Superfund also pays for overseeing responsible parties conducting cleanup.

Two types of responses may be taken when a hazardous substance is released (or threatens to be released) into the environment:

- **Removal actions** -- emergency-type responses to imminent threats. SARA limits these actions to 1 year and/or \$2 million, with a waiver possible if the actions are consistent with remedial

responses. Removal actions can be undertaken by the private parties responsible for the releases or by the Federal government using the Superfund.

- **Remedial responses** -- actions intended to provide permanent solutions at uncontrolled hazardous waste sites. Remedial responses are generally longer-term and more expensive than removals. A Superfund-financed remedial response can be taken only if a site is on the NPL. EPA published the first NPL in September 1983. The list must be updated at least annually.

EPA's goals for the Superfund program are to:

- Ensure that polluters pay to clean up the problems they created
- Work first on the worst problems at the worst sites, by making sites safe, making sites clean, and bringing new technology to bear on the problem

## REMEDIAL RESPONSES

The money for conducting a remedial response at a hazardous waste site (and a removal action, as well) can come from several sources:

- The individuals or companies responsible for the problems can clean up voluntarily with EPA or State supervision, or they can be forced to clean up by Federal or State legal action.
- A State or local government can choose to assume the responsibility to clean up without Federal dollars.
- Superfund can pay for the cleanup, then seek to recover the costs from the responsible party or parties.

A remedial response, as defined by the National Contingency Plan (the Federal regulation by which Superfund is implemented), is an orderly process that generally involves the following steps:

- Take any measures needed to stabilize conditions, which might involve, for example, fencing the site or removing above-ground drums or bulk tanks.
- Undertake initial planning activities to scope out a strategy for collecting information and analyzing alternative cleanup approaches.
- Conduct a remedial investigation to characterize the type and extent of contamination at the site and to assess the risks posed by that contamination.
- Conduct a feasibility study to analyze various cleanup alternatives. The feasibility study is often conducted concurrently with the remedial investigation as one project. Typically, the two together take from 18 to 24 months to complete and cost approximately \$1.3 million.
- Select the cleanup alternative that:
  - Protects human health and the environment
  - Complies with Federal and State requirements that are applicable or relevant and appropriate

- Uses permanent solutions and alternative treatment technologies or resource recovery technology to the maximum extent practicable
- Considers views of State and public
- Is "cost effective" -- that is, affords results proportional to the costs of the remedy
- Design the remedy. Typically, the design phase takes 6 to 12 months to complete and costs approximately \$1.5 million.
- Implement the remedy, which might involve, for example, constructing facilities to treat ground water or removing contaminants to a safe disposal area away from the site.

EPA expects the implementation (remedial action) phase to average out at about \$25 million (plus any costs to operate and maintain the action) per site, and some remedial actions may take several years complete.

The State government can participate in a remedial response under Superfund in one of two ways:

- The State can take the lead role under a cooperative agreement, which is much like a grant in that Federal dollars are transferred to the State. The State then develops a workplan, schedule, and budget, contracts for any services it needs, and is responsible for making sure that all the conditions in the cooperative agreement are met. In contrast to a grant, EPA continues to be substantially involved and monitors the State's progress throughout the project.
- EPA can take the lead under a Superfund State Contract, with the State's role outlined. EPA, generally using contractor support, manages work early in the planning process. In the later design and implementation phases, contractors do the work under the supervision of the U.S. Army Corps of Engineers. Under both arrangements, the State must share in the cost of the implementation phase of cleanup.

CERCLA requires that EPA select the remedy.



## CONCORD NAVAL WEAPONS STATION Concord, California

Concord Naval Weapons Station is located in the north-central portion of Contra Costa County, California. Approximately 30 miles northeast of San Francisco, it is bordered to the north by Suisun Bay and to the south and west by the City of Concord. The facility encompasses over 12,800 acres of inland and tidal areas, plus a radiography facility in Pittsburg, California. The Concord Station serves as the major ammunition transshipment port on the west coast for the Department of the Navy. On-site activities also include administrative and support work. Transshipment operations are centered on the wetlands bordering Suisun Bay (commonly called the Tidal Area). Wastes generated on-site from base operations have been disposed of in the Tidal Area since base operations began in 1942.

The Navy's substantial investigations of the station have identified 32 areas potentially containing hazardous substances. The investigations are focusing primarily on six areas in the 7,630-acre Tidal Area.

The *Tidal Area Landfill*, *R-Area Disposal Site*, and the *Wood Hogger Site* are wetlands in the western tidal area contaminated from on-base waste disposal practices. An estimated 3,000 tons of mixed waste have been deposited in the Tidal Area Landfill since the 1940s. Material and waste generated during the segregation of conventional munitions were discarded in the R-Area Disposal Site. At the Wood Hogger Site, wood contaminated with pentachlorophenol (PCP) was chipped and placed in an adjacent wetland. Analytical investigations identified hazardous substances, including zinc, copper, lead, cadmium, arsenic, naphthalene, and methylene chloride, in soil, sediment, or surface water.

*Allied Sites A and B*, the *Kiln Site*, and the *K-2 Area* are wetlands in the eastern tidal area. They were contaminated from private industrial activities, and were subsequently purchased by the Navy to create a "buffer zone" for base operations. Soil sampling in these areas in 1986 detected zinc, copper, lead, cadmium, and arsenic. High tides inundated the sources, carrying contaminants to Suisun Bay. Elevated levels of copper, zinc, lead, and arsenic were detected in surface and composite soil in the K-2 Area.

The contaminated areas are critical habitats for the salt marsh harvest mouse, a Federally endangered species. The black clapper rail, also a Federally endangered species, inhabits adjacent wetlands. Suisun Bay supports extensive commercial and recreational fishing. Other potential areas of concern at the station include the Froid and Taylor Road Disposal Area, the Black Pit at Red Rock Site, and the G-1 Site.

This site was proposed to the NPL on June 24, 1988 (53 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comments, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on August 30, 1990 (55 FR 35502). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water pathway, which is scored differently under the two systems.

*(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)*



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## **COOPER DRUM CO. South Gate, California**

Cooper Drum Co. recycles drums on 3.8 acres at 9316 South Atlantic Avenue in South Gate, Los Angeles County, California. Since 1941, Cooper has reconditioned closed-topped, steel drums that previously held a variety of industrial chemicals. The facility is bounded by industrial properties to the north and east, mixed commercial/residential properties to the west, and a former elementary school (Tweedy Elementary School) to the south. On the Cooper property are storage areas for used and reconditioned drums and a drum processing area, plus office, maintenance, and warehouse buildings. Most of the site is paved.

In April 1987, the Los Angeles County Health Department (LACHD) Emergency Response Team responded to an incident at the Tweedy School property. An unknown quantity of highly caustic liquid waste had migrated via underground seepage from the Cooper property. The source of the waste was the caustic wash water from the drum recycling process line located in the building directly north of the school property. Initially, the waste was determined to be comprised mainly of sodium hydroxide and oil. The top layer of soil was excavated. Since contamination had migrated to a portion of the school property, it was paved over. Due to health concerns related to several sites in the area, Tweedy School has since been closed, and no further remedial action is planned at this time.

In June 1987, analysis of on-site soil samples by consultants for Cooper detected volatile organic compounds (VOCs) to depths of 30 feet. In 1990, the consultants drilled three monitoring wells to characterize the extent of contamination in shallow ground water beneath the site. Analysis of samples from the wells documented VOCs, including tetrachloroethene, trichloroethene, vinyl chloride, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, and benzene.

In 1987, South Gate closed four of its municipal wells due to tetrachloroethene contamination. These four wells lie between 500 and 1,500 feet downgradient of Cooper and draw water from the Silverado Aquifer, which occurs at 600 feet bgs. Contamination of these wells cannot be attributed solely to Cooper at this time because there are other potential sources of VOCs in the vicinity. However, evidence suggests the shallow aquifer and the lower Silverado Aquifer are hydraulically connected, so that water can move between them.

Municipal wells within 4 miles of the site supply drinking water for approximately 335,000 people. The nearest well is 0.2 mile from the site. The majority of the wells draw from the Silverado Aquifer.

Tanks and sludge pits in the drum processing area are open to the air, creating a potential for gases and particles to be released to the air. An estimated 340,000 people live within 4 miles of the site, and 50 people work on the site. A sensitive environment is within 3 miles.

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## **DEL AMO FACILITY Los Angeles, California**

The Del Amo Facility occupies approximately 300 acres at Del Amo Boulevard and Vermont Avenue, 12 miles south of the center of the City of Los Angeles, Los Angeles County, California. The site is bounded to the north by a residential neighborhood and to the west, north, and east by light industrial and commercial facilities.

From 1943 through the mid-to-late 1960s, the Del Amo site was occupied by a large industrial facility that was built by the U.S. Government to produce synthetic rubber during World War II. The complex consisted of a styrene plant operated by Dow Chemical Co., a butadiene plant operated by Shell Oil Co., and a synthetic rubber plant operated by U.S. Rubber Co. and Goodyear Tire & Rubber Co. The styrene process included ethylene production via propane cracking, ethylbenzene production from ethylene and benzene, and dehydrogenation of the ethylbenzene to produce styrene. The butadiene was manufactured from a petroleum-derived butylene mixture. The styrene and butadiene were then piped to the rubber plant, where they were mixed to produce synthetic rubber.

Process wastestreams were directed into separator units within each facility. The sludge that settled out in the separator units was either transported off the site or disposed of in a waste disposal area in the southern portion of the Del Amo property. This 4-acre disposal area consisted of six unlined pits and three unlined evaporation ponds. The effluent from the separator units was discharged into a flood control channel approximately 0.5 mile east of the site.

The three plants were shut down in the mid- to late-1960s, and the disposal pits and ponds were covered with soil. The Del Amo property was subsequently sold to developers. Currently, most of the site is occupied by light industrial and commercial facilities. The 4-acre former disposal area is a fenced-in vacant lot overgrown with weeds.

In 1984, a contractor to GP Holdings, the current owner, found benzene, toluene, ethylbenzene, naphthalene, and cadmium in the sludge-like wastes in the pits and ponds, and in underlying soils. Benzene and ethylbenzene were detected in soils at 50 feet below ground surface. Ground water beneath the Del Amo site is at approximately 60 feet below ground surface, and soils are permeable. These conditions facilitate movement of contaminants, thus threatening the drinking water supplied to 34,000 people by municipal wells within 4 miles of the site, the nearest within 2 miles of the site. Because some portions of the former disposal area are inadequately covered, contaminants can be released into the air. An estimated 17,600 people live within 1 mile of the site.



**GBF, INC., DUMP  
Antioch, California**

The GBF, Inc., Dump covers approximately 88 acres at the corner of Somersville Road and James Donlon Boulevard in Antioch, Contra Costa County, California. The site is bounded on the north and east by residential developments, to the south by open space and a former sanitary landfill (Lynch landfill) that accepted municipal wastes, and to the east by open space and a former petroleum tank farm.

Between the early 1960s and 1975, Industrial Tank Corp. leased the eastern 64 acres of the site and operated up to 10 surface impoundments covering approximately 11 acres. The unlined impoundments were interconnected by a series of cascading conduits, allowing liquid wastes to flow freely. The company accepted sludges, acids, oils, and slurries containing such hazardous substances as hexavalent chromium, lead, cyanide, asbestos, acetone, trichloroethylene, benzene, tetrachloroethylene, formaldehyde, phenol, DDT, and diazinon.

In 1974, the California Regional Water Quality Control Board (CRWQCB) issued a Cleanup and Abatement Order which closed the surface impoundments and prohibited hazardous waste disposal at the site after October 1, 1974. Since then, the site has accepted only non-hazardous waste.

Monitoring wells on and north of the site are contaminated with cadmium, nickel, cyanide, and numerous volatile organic compounds (VOCs), according to a 1990 report of a consultant to the California Department of Toxic Substances Control (CDTSC).

An intermittent creek, Markley Creek, runs north along the western property boundary, and a drinking water canal, the Contra Costa Canal, runs west along the northern property boundary. Markley Creek runs between the cities of Antioch and Pittsburg and eventually empties into a marsh adjacent to the San Joaquin River. High lead levels (65 milligrams per kilogram) were detected in the sediments of Markley Creek adjacent to the site. The Contra Costa Canal is the primary source of drinking water for cities in the area of the site. Intakes within 15 miles downstream of the site provide drinking water to approximately 327,500 people. Residents outside the limits of the municipal canal water system generally drink bottled water.

CDTSC, with input from CRWQCB, is overseeing field work for the remedial investigation/feasibility study (RI/FS) to determine the type and extent of contamination at the site and identify alternatives for remedial action. The RI/FS is underway.

This site was proposed to the NPL on June 24, 1988 (53 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comments, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on October 4, 1989 (54 FR 41015). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water pathway, which is scored differently under the two systems.

*(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)*



**STOKER CO.  
Imperial, California**

Stoker Co. operates at 3390 Dogwood Road in a sparsely populated agricultural area in Imperial, Imperial County, California. The company has been an aerial pesticide applicator and pest control supplier since 1966 and in 1990 employed 45 people. A canal that runs along the southern and eastern borders of the airstrip delivers water to a residence less than 80 feet from the site, wetlands, and a commercial fishery. The wetland is located along the entire length of the airstrip and provides habitat for four endangered or threatened species. The fishery produces catfish for human consumption and is located 0.25 mile from the site.

Wash waters from the cleaning of pesticide application equipment are sprayed onto a 20-acre land treatment area on-site consisting of a dirt road and landing strip. Occasionally rinse waters from the rinsing of hoppers in the aircraft and pesticide containers were also sprayed on this area. The disposal of wash waters is permitted under Waste Discharge Requirements issued by the California Regional Water Quality Control Board (CRWQCB) in October 1974 and June 1988. Under this permit, Stoker is required to sample the unsaturated zone and ground water beneath the site. The requirements indicate that approximately 300 gallons of pesticide rinsewater per day were disposed of in the land treatment area in the 1970s, dropping to approximately 100 gallons per day sometime prior to 1988. In 1989, Stoker submitted a closure plan for the land treatment unit to CRWQCB and indicated that it would cease spraying wash waters on-site. Stoker later reconsidered and continues to spray wash waters on-site.

The site first came to the attention of local authorities in May 1988 when birds and fish were killed in a pond in a nearby residence. The California Department of Fish and Game and the Department of Food and Agriculture determined that the fish tissue was contaminated by several pesticides. The pond was subsequently closed.

Shortly after the fish were killed, a warehouse containing pesticide supplies burned to the ground. The company subsequently removed 300 tons of contaminated soil to a landfill regulated under Subtitle C of the Resource Conservation and Recovery Act. Also on the site is an area where empty pesticide bags and boxes were burned.

In December 1988, EPA sampled on-site soil, the nearby canal, and the pond. Analyses identified several pesticides, including dacthal, diazinon, chlorpyrifos, and mevinphos, in the canal. Sediment and air samples EPA collected in 1989 indicated pesticides had been released to the air and nearby wetland. Approximately 130 people live within 1 mile of the site. The plant's 45 employees are exposed to contaminated soil. A family that formerly lived on a portion of the property moved due to the contamination.

Although the site is located in an agricultural area where pesticides are widely used, the levels in air, surface water, sediment, and soil samples significantly exceed background concentrations. Due to the poor quality of ground water and surface water in the area, most people rely on bottled water for their drinking water.



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## **SMELTERTOWN Salida, Colorado**

The Smelertown site covers approximately 100 acres in a rural area near Salida, Choffee County, Colorado. It consists of areas involving operations of Koppers, Inc., CoZinCo, Inc., and a smelter.

Koppers treated railroad ties on the site during 1926-46. When the surface soil became saturated with creosote dripping from the ties, a layer of sand was added and operations continued. The current owner, Butala Construction Co., scraped the soils into a pile to make room for gravel mining operations.

CoZinCo has processed zinc sulfate and smelter slag on the site since 1977. Soil on the property contains elevated levels of heavy metals, including chromium, lead, zinc, antimony, nickel, and lead, according to a 1987 EPA report. Contaminants were found in three drum storage areas, two ponds used to hold spent processing water, a pile consisting of sludge scraped from the ponds, and an area where sludge was worked into the soil.

While the smelter operated (1902-1920), molten slag was removed from the furnaces and dumped down a bluff toward the Arkansas River. Shallow soil in the smelter area is also contaminated from smelter stack emissions and spilled ore.

Ground water on the site is contaminated with heavy metals (zinc, barium, manganese, and antimony) and creosote constituents (fluorene and 2-methylnaphthalene), according to a 1988 EPA report. An estimated 3,700 people obtain drinking water from public and private wells and springs within 4 miles of the site, the nearest approximately 1,000 feet from the site.

The 1988 report also documented metals and creosote constituents in air, and metals in the Arkansas River downstream of where Kimmet Spring discharges into the river. Two recreation areas are nearby, and the river is used for fishing. An estimated 5,200 people live within 4 miles of the site.

Butala Construction Co. workers can be exposed to contaminated soil on the site. Since the site is accessible, the 200 people living within 1 mile of the site may also be exposed.

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## **BROWARD COUNTY - 21ST MANOR DUMP Fort Lauderdale, Florida**

The Broward County School Board formerly deposited municipal wastes in a 4.5-acre open dump in a residential neighborhood of Fort Lauderdale, Broward County, Florida. The area has been filled to grade, and 21st Manor runs through the middle. The school board owned the site, located on the southern portion of the Meadowbrook Elementary School property, and operated it from the 1950s to the late 1960s, when it was closed by the Broward County Health Department. The school board kept no records of the types and quantities of wastes deposited. Unauthorized parties also deposited wastes at the site.

Investigations of the site since early 1987 by the Broward County Public Health Unit, Florida Department of Environmental Regulation, and EPA found chromium, lead, and zinc on-site in monitoring wells, trichloroethylene off-site in two private wells, and 1,2-dichloroethane off-site in Well #18 of Fort Lauderdale's South Dixie Wellfield. The well has been taken out of service. An estimated 166,700 people obtain drinking water from public and private wells within 4 miles of the site, the nearest a private well within less than one-quarter mile of the site.

The Biscayne Aquifer, the sole source of drinking water in southeast Florida, is comprised primarily of permeable sand and limestone in Broward County. Ground water is shallow (9-10 feet). These conditions facilitate migration of contaminants in ground water.

In March 1989, EPA found DDE, DDD, dieldrin, toluene, lead, chromium, and zinc in surface and subsurface soils on the site. Over 400 students attend Meadowbrook Elementary School. An estimated 13,000 people live within 1 mile of the site.



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## **STAUFFER CHEMICAL CO. (TAMPA PLANT)** **Tampa, Florida**

Stauffer Chemical Co. formulated pesticides adjacent to the Tampa Bypass Canal at 2009 Orient Road in Tampa, Hillsborough County, Florida, between 1951 and 1986. The site covers 40 acres in an industrial area. Currently, Imperial Chemical Industries owns the facility; in the past, it has been owned by Cheeseborough Ponds, Inc., and Unilever.

Stauffer Chemical received bulk shipments of agricultural chemicals, which it then formulated into insecticides and herbicides in the forms of dusts, grains, and liquids for packaged distribution. Between 1953 and 1973, various portions of the property were used as disposal areas, among them: 1) the "Barren Area," a large area of soil apparently contaminated through runoff from a storage/disposal area; 2) an area where 8,000 to 10,000 gallons of toxaphene, which had leaked from a tank car, were buried; and 3) an area of contaminated soil where an incinerator once operated.

EPA investigations conducted in 1987-88 documented contamination in on-site soils, sediments, ground water, and air. Contaminants included 4,4'-DDT, 4,4'-DDD, 4,4'-DDE, lindane, and alpha-BHC. The formations underlying the site are 1) the unconfined surficial aquifer consisting of interbedded sands, clays, and shells that are approximately 25 feet thick; and (2) the Upper Floridan Aquifer consisting of the Tampa Limestone, Suwanee Limestone, Ocala Group, and the Avon Park Limestone. Public and private wells within 4 miles of the site provide drinking water to an estimated 6,700 people. The nearest well is a private well 0.24 mile northwest of the site. Approximately 113,000 persons work, attend school, and/or reside within 4 miles of the facility.

*(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)*



## STAUFFER CHEMICAL CO. (TARPON SPRINGS PLANT) Tarpon Springs, Florida

Stauffer Chemical Co. is located in an industrialized area between Anclote Boulevard and the Anclote River in Tarpon Springs, Pinellas County, Florida, about 1.6 miles east of the Gulf of Mexico. Stauffer purchased the 160-acre facility from Victor Chemical Works in 1960. The facility's ownership has changed several times; it is currently owned by Stauffer Management Co.

From 1950 to 1981, the facility manufactured elemental phosphorus from phosphate ore. The processed ore was shipped off-site to be used primarily for production of agricultural pesticides, food-grade phosphates, and flame retardants.

During the years of operation, a number of processing wastes were disposed of on the site. A system of seven unlined lagoons, about 600 feet from the Anclote River, received discharges of waste scrubber liquid and phosphorus water, as well as overflow from a calcium silicate slag pit. At some time, two of the lagoons were dredged, and the dredged material, composed of calcium sulfate/sulfite, calcium silicate, calcium fluoride, phosphate sand, and calcined phosphate dust, was placed in two piles approximately 40 feet from the Anclote River.

Other on-site disposal activities included the dumping of furnace dust in an isolated pond and the burial of 900 drums of calcined phosphate sand consisting of 20% elemental phosphorus. Over 500,000 tons of chemical process wastes were disposed of on the site between 1950 and 1979.

The site is underlain by a surficial aquifer composed primarily of sand and the Floridan Aquifer composed of limestone. Water is reached at an average depth of 8 feet below land surface. The Floridan Aquifer is encountered at 17 to 37 feet and is approximately 100 feet thick in the area of the site.

On-site monitoring wells into both aquifers are contaminated with barium, chromium, lead, vanadium, zinc, copper, and arsenic, according to EPA tests conducted in 1988 and 1989. The 1989 tests found these metals in the on-site waste piles. An estimated 8,500 people in the Tarpon Springs area receive drinking water from 23 public wells and 3 private wells located within 4 miles of the site. Because of the depths of the aquifers, all drinking water wells within 4 miles of the site are potential targets.

EPA's 1988 and 1989 tests also detected most of the same heavy metals in the Anclote River. Surface water runoff from the facility could flow south/southwest and enter the Anclote River, which is used for fishing. From there, the Anclote River flows 1.6 miles and empties into the Gulf of Mexico. Although no surface water intakes are located along the drainage pathways of the site, numerous county parks, State parks, and beaches are present and are extensively used. In addition, several wetlands that support a number of endangered and protected species are located along the surface water pathway.

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## U.S. SMELTER AND LEAD REFINERY, INC. East Chicago, Indiana

U.S. Smelter and Lead Refinery, Inc. (USS Lead) formerly operated on a 79-acre property at 5300 Kennedy Avenue in East Chicago, Lake County, Indiana. The Indiana Harbor Belt Railroad is to the north of the site, the East West Toll Road and the east branch of the Grand Calumet River to the south, Kennedy Avenue to the east, and Indiana Harbor Canal to the west. The area is primarily industrial.

From about 1906 to 1920, a copper smelter operated on the property. Starting in 1920, among other activities USS Lead operated a primary lead smelter on 25 acres of the property. In 1973, USS Lead converted to secondary smelting, recovering lead from scrap metal and old automobile batteries. Operations stopped in December 1985.

Two waste materials were generated during smelting. The blast furnace slag was piled up south of the plant building; once a year, the pile was leveled off into what was originally a nearby 21-acre wetland, according to the Army Corps of Engineers. Tests conducted in 1986 by the Indiana Department of Environmental Management (IDEM) detected elevated levels of lead in the slag.

The second waste material, lead-containing dust emitted by the blast furnace stack, was originally trapped in bag filters and stockpiled on-site for possible recycling or sale. A larger blast furnace, installed in 1973, was intended to recycle both new and stockpiled dust. Dust awaiting recycling covered a 3- to 5-acre area. Significant amounts of dust were later transferred into a building to prevent dispersion. Substantial amounts of dust remain on-site. Dust has been spread by wind throughout the building, which has become dilapidated.

In 1975, USS Lead received a permit under the National Pollutant Discharge Elimination System (NPDES) to discharge furnace cooling water and storm water run-off collected from the site to the Grand Calumet River. A second permit was issued in April 1985. Over the years, the permit levels for lead, cadmium, copper, arsenic, and zinc were frequently exceeded, according to IDEM. In the 1980s, several State and Federal enforcement actions were taken against USS Lead for permit violations. These violations, plus the dumping of slag water into the wetland, have contributed to contamination of surface water in the area. An estimated 4.1 million people obtain drinking water from intakes primarily into Lake Michigan within 15 miles downstream of where hazardous substances from the site enter surface water. Lake Michigan, the Grand Calumet River, and Indiana Harbor Canal are used for fishing. Hammond Beach Marina is 4 miles west of where the canal enters Lake Michigan. Lake Michigan, Wahala Beach, and several other major recreation areas are within 15 miles of the site.

In September 1985, the Indiana State Board of Health determined that USS Lead was in violation of State law because it was emitting lead particles into the air downwind of the site. An estimated 7,500 people work or attend school within 2 miles of the site. The Grand Calumet River Natural Area, ¼ mile southeast of the site, is habitat for two species designated as endangered by the State.

In 1980, USS Lead received Interim Status under Subtitle C of the Resource Conservation and Recovery Act (RCRA) when it filed Part A of a permit application. In April 1990, IDEM adopted a Partial Interim Agreed Order requiring USS Lead to develop a cleanup plan for the site. Sharon Steel Corp., USS Lead's parent company, agreed to loan money to USS Lead to meet the requirements. However, Sharon Steel has filed for protection under Chapter 11 of the Federal bankruptcy code.

The site is being proposed for the NPL because it satisfies a component of the NPL/RCRA policy: the owner has demonstrated an inability to finance appropriate remedial action by invoking bankruptcy laws.

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## **NATIONAL SOUTHWIRE ALUMINUM CO. Hawesville, Kentucky**

National Southwire Aluminum (NSA) Co., a division of Southwire of Carrollton, Georgia, began aluminum reduction operations in 1969 on a 1,100-acre site at the intersection of Kentucky Highways 271 and 334 in a rural section of Hancock County near Hawesville, Kentucky. Two clay-lined ponds, each covering 5 to 7 acres, were constructed for disposal of spent pot linings from the aluminum reduction process (North Pond) and calcium fluoride slurry from the air quality control system (North and South Ponds). NSA closed the North Pond and covered it with a synthetic cap and a layer of soil after the Kentucky Division of Waste Management conducted a preliminary assessment in 1986. Currently, the pond is densely vegetated. The South Pond has been filled to capacity, and its use ceased in 1989. A third, synthetically-lined pond, designated as the New Pond, is now used for disposal of the calcium fluoride slurry.

In 1979, NSA determined that leaching was occurring beneath the North Pond. Cyanide, which is produced in the aluminum reduction process and which is present in the potliners, and fluoride were found in ground water in the area of the disposal ponds. In 1985, NSA found cyanide in one of its three production wells. At that time, the wells were providing drinking water to more than 1,000 employees; the wells were subsequently taken out of service. Other wells that draw from the Ohio River alluvial aquifer within 4 miles of NSA currently serve approximately 16,000 people.

In November 1989, EPA detected significant concentrations of cyanide, arsenic, lead, and nickel in on-site ground water and sediments in the plant's effluent ditch, which flows along the west border of the plant, alongside the disposal ponds, and into the Ohio River.

NSA currently operates under a permit under the National Pollutant Discharge Elimination System. Since 1987, EPA has cited NSA twice for exceeding permit limits: in August 1987 for exceeding total residual chlorine and in November 1990 for exceeding total recoverable zinc in storm water.



## **BLACKBURN AND UNION PRIVILEGES Walpole, Massachusetts**

Blackburn and Union Privileges (also referred to in historical documentation as the "South Street" site or "Shaffer Realty Trust" site) covers approximately 30 acres on South Street in Walpole, Norfolk County, Massachusetts. The area is primarily residential. Industrial and commercial facilities have been active on 6 of the estimated 24 lots since the 17th century, with the remainder being used as residential and non-commercial properties. Portions of the properties (principally the commercial properties) are currently owned by Shaffer Realty Nominee Trust and BIM Investment Trust.

Records identify the area occupied by these lots as "The Blackburn Privilege" and "The Union Factory Privilege" (later shortened to "Union Privilege"). These privileges were 2 of 10 original, distinct water privileges established along the Neponset River during the 17th century. The mill/factory established on the Union Factory Privilege produced snuff, iron, nails, cotton, and wool, and also functioned as a tannery. A dam on Blackburn Privilege generated power for production of machinery, cotton, yarn, batting, and lamp wicking.

During the 17th and 18th centuries, these privileges were used for a variety of industrial and commercial uses. The industrial processes used hazardous substances, including chromium, arsenic, and mercury.

In 1915, Standard Woven Fabric Co. began manufacturing asbestos brake linings on the commercial lots. The process started with the crushing of the raw asbestos. A pile of asbestos waste materials remains on the site. In 1920, the company changed its name to Multibestos. Operations ceased in 1937, when the properties were sold to Kendall Co.

Kendall operations involved the washing, scouring, and bleaching of cotton, followed by fabric production involving card washing, rinsing, drying, and winding. Waste water from the cotton operations was brought within sewer permit requirements for pH, then discharged to two lagoons, where the cotton fibers settled out before the water was discharged to the sanitary sewer. Use of Lagoon No. 1 stopped in 1982. Lagoon No. 2 continued to receive non-contact cooling water until approximately 1985.

On December 15, 1988, under CERCLA Section 106(a), EPA issued an order requiring Shaffer Realty Nominee Trust and BIM Investment Trust to conduct a removal action at the site. During the response to the order, the companies' contractor detected elevated concentrations of asbestos, lead, arsenic, nickel, and other inorganic elements, as well as volatile and non-volatile organic compounds, in on-site soils, sediments, and ground water. Municipal wells drawing on the School Meadow Brook/Mine Brook aquifer within 4 miles of the site provide drinking water to 19,500 residents of the Town of Walpole. The nearest well is 0.7 mile from the site.

The site is within the boundaries of the Neponset River drainage basin. The river borders the commercial properties on the lots' southern sides.

*(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)*



## **GENERAL ELECTRIC CO./SHEPHERD FARM East Flat Rock, North Carolina**

The General Electric Co./Shepherd Farm site is in East Flat Rock, Henderson County, North Carolina. Since 1955, General Electric's Lighting System Division has manufactured various types of luminaire systems on a 50-acre property bounded by Tabor Road, Spartanburg Highway (U.S. 176), and Bat Fork Creek. On the GE property are a manufacturing plant, a warehouse, plots used for landspreading of wastes, two unlined waste treatment ponds, a sludge impoundment, landfills, and a recreation center.

From 1957 to 1970, wastes from the General Electric (GE) facility were also disposed of approximately 2,500 feet to the southwest in an old dry pond or ravine known as Shepherd Farm. Wastes were brought to this 3-acre area and deposited, burned, then bulldozed. A trailer park is now located on a portion of the old dump site. Samples collected in May 1990 by EPA indicate primarily the same waste types and contaminants are present on Shepherd Farm and the GE property. GE wastes were also deposited on the Seldon Clark property located across Tabor Road from GE. GE wastes may also have been deposited in other nearby areas.

Studies conducted by EPA, the State, and GE between 1976 and 1989 revealed that several inorganic compounds and volatile organic compounds (VOCs) had contaminated ground water and surface water sediments on and off both the GE property and the farm. A drainline that carried wastewater from the manufacturing plant to the treatment ponds had apparently ruptured. VOCs also contaminated 19 nearby private wells. Municipal water lines have been extended to these homes. The wastewater treatment ponds and sludge impoundment on-site were found to be contaminated with PCBs and heavy metals.

Among the compounds identified in on-site and off-site wells are tetrachloroethene, trichloroethene, 1,2-dichloroethene, 1,2-dichloroethane, cobalt, chromium, copper, lead, nickel, zinc, and manganese. An estimated 4,400 people formerly obtained drinking water from private wells within 4 miles of the site, the nearest 0.04 mile from the site.

Soils in the trailer park contain PCBs, according to a 1991 EPA report.

The GE plant received Interim Status under Subtitle C of the Resource Conservation and Recovery Act (RCRA) in 1980 when the company filed Part A of a permit application. In 1984, GE converted to a hazardous waste generator. The site is being proposed for the NPL because as a converter it satisfies a component of EPA's NPL/RCRA policy.

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## **KOPPERS CO., INC. (CHARLESTON PLANT) Charleston, South Carolina**

Koppers Co., Inc., operated a milling, wood-preserving, and pole storage facility in the Charleston Heights District of Charleston, Charleston County, South Carolina, during 1925-78. The 127-acre site is in a mixed industrial/residential area. It is bordered on the west by Ashley River, and on the north and south by industrial facilities. Approximately 94,000 people live within 4 miles of the site.

Sources of hazardous substances on the site include a pit where timbers were soaked in creosote wood preservative, the "drip pad area" where the timbers were stored, and a bermed area that received contaminated sediment from canal dredging on the site. Southern Dredging Co. leased part of the site in 1978 after wood-preserving operations had stopped. In 1984, the company dredged a canal from the Ashley River, intersecting a waste disposal area. Dredged materials were placed in the bermed area.

EPA tests conducted in 1988 detected numerous polynuclear aromatic hydrocarbons (PAHs), which are constituents of creosote, in soil in all three sources. Runoff from all three sources enters the Ashley River. The 1988 tests found PAHs, chromium, copper, and zinc (metals typically used in wood preservatives) in sediment samples from the canal and the Ashley River.

Wetlands are adjacent to the site, and wetlands to the west and southwest are a State wildlife sanctuary. The Ashley River and Charleston Harbor support recreational and commercial fishing, and serve as important breeding and nursery habitats for a variety of marine finfish and shellfish.

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## **ANNIE CREEK MINE TAILINGS** **Lead, South Dakota**

The Annie Creek Mine Tailings cover 5 acres in the upper reaches of Annie Creek, a tributary to Spearfish Creek in the Black Hills National Forest 3.5 miles west of Lead, Lawrence County, South Dakota. Between 1907 and 1916, gold ore was processed at the mine, part of the Bald Mountain-Lead mining district, by a small cyanide mill. Buildings and two vats remain from these past activities. The tailings fill a small head-water basin. Channels forming Annie Creek arise from the tailings and surrounding hillsides. Annie Creek flows through the tailings and a wooden crib dam, then merges with Spearfish Creek approximately 2 miles downstream.

High concentrations of arsenic have been detected in Annie Creek water and sediments since the early 1980s. In 1989, EPA detected arsenic in the tailings and in Annie Creek below the dam, which forms the downstream boundary of the tailings, and downstream in Spearfish Creek approximately 3 miles from the site. High concentrations of arsenic are mainly found in the sediments of Annie Creek and Spearfish Creek. Both streams are designated as trout spawning areas, and both are used for trout fishing. Spearfish Creek Canyon is designated a National Scenic Highway and River. The Spearfish municipal supply system provides drinking water to an estimated 6,000 people, approximately half of it coming from an intake into Spearfish Creek 12 stream miles from the Annie Creek Tailings.



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## PANTEX PLANT (USDOE) Pantex Village, TX

The Pantex Plant is in Pantex Village, Carson County, Texas, approximately 17 miles northeast of Amarillo. The area is primarily agricultural. The plant is owned by the U.S. Department of Energy (USDOE) and operated under contract by Mason and Hangar-Siles Mason Co. The plant itself covers 9,100 acres. In addition, there is a buffer zone consisting of a 1,077-acre portion of Pantex Lake owned by USDOE and 3,170 acres of land leased by USDOE from Texas Technological University.

The plant began in 1942 as an Army Ordnance Corps facility. Nuclear operations began in 1950. Current operations -- which include fabrication of nuclear weapon ammunition and assembly, testing, and disassembly of nuclear weapons -- involve 141 solid waste management units. Past and present waste practices include burning of chemical wastes in unlined pits, burial of wastes in unlined landfills, and discharging of plant waste waters into on-site surface waters. More than 150 potential contamination sources have resulted from these practices, of which 15 are being evaluated initially.

In 1988, a USDOE contractor detected acetone, toluene, tetrahydrofuran, trichloroethylene (TCE), bromoform, 1,2-dichloroethane, arsenic, barium, chromium, lead, mercury, and silver in waste waters discharged to unlined ditches and surface impoundments on the site. USDOE also detected acetone, TCE, tetrahydrofuran, toluene, 1,2-dichloroethane, 2-butanone, tetrachloroethylene, and 1,1,1-trichloroethane in soil underlying a chemical burn pit used for evaporation and percolation of solvents contaminated with high explosives, and uranium in soil underlying firing grounds FS-4, FS-5, and FS-10.

Toluene is present at 329 feet below the surface in soils underlying the pit. The Ogallala Aquifer occurs at a depth of 390 to 420 feet beneath the site. A zone of low permeability occurs beneath the site at a depth of 350 feet; the thickness varies from 25 to 100 feet. Contamination is documented in this zone. The aquifer serves as the primary source of domestic and municipal water supply. Amarillo has a blended system that provides water to 160,000 customers, approximately 36% of them from a well field within 4 miles of Pantex; 20 domestic wells have been identified within 1 mile. Pumping by the city has created a cone of depression, causing ground water underlying Pantex to flow toward the municipal well field.

Surface water run-off from the facility is directed into on-site playas. While some are used as surface impoundments, others not receiving plant waste water are considered fresh water wetlands. Texas Tech Agricultural Research Station uses surface water from Playa 4 for both irrigation of crops and watering of livestock.

Under the Comprehensive Environmental Assessment and Response Program, USDOE has begun characterizing and cleaning up the most severe environmental problems and has developed an Environmental Restoration and Waste Management 5-Year Plan.



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## **RICHARDSON FLAT TAILINGS** **Summit County, Utah**

The Richardson Flat Tailings site covers approximately 160 acres in a valley 1.5 miles northeast of Park City, Summit County, Utah. One source of hazardous substances on the site is a tailings dam and associated tailings materials that came from the Keetley Ontario Mine and other metal mining operations currently owned by United Park City Mines (UPCM). The most recent use of the area for tailings disposal was during 1975-81, when UPCM leased its mining properties to either Park City Ventures or Noranda Mining, Inc. The two companies constructed and operated milling facilities on UPCM properties.

A second source is a 6-acre "flood plains tailing pile" immediately west of the tailings pond on the banks of Silver Creek. Historical aerial photos show that the pile was in existence as early as 1953. During 1989-90, EPA and the State observed tailings slumping into an on-site diversion ditch and Silver Creek. The tailings contain arsenic, cadmium, copper, lead, mercury, silver, and zinc, according to EPA tests conducted in 1985 and 1989. The State classifies Silver Creek as a cold water fishery. Wetlands border the creek and diversion ditch. Water from the creek is diverted to irrigate approximately 300 acres of pastureland.

High-volume air sampling at the site in 1986 documented that arsenic, cadmium, lead, and zinc were released to the air. An estimated 4,500 people live within 4 miles of the site.

This site was proposed to the NPL on June 24, 1988 (55 FR 23988) on the basis of a score above the 28.50 cutoff on the original Hazard Ranking System (HRS). In response to public comment, the score fell to below the cutoff, and the site was dropped from consideration for the NPL on February 11, 1991 (56 FR 5598). It is being proposed at this time on the basis of its score on the revised HRS. New information was used to evaluate the surface water migration pathway, which is scored differently under the two systems.

*(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See FR 5600, February 11, 1991 or subsequent FR notices.)*



## TUTU WELLFIELD Tutu, Virgin Islands

The Tutu Wellfield site involves a plume of contaminated ground water covering approximately 108 acres in Tutu in a mountainous semi-rural area of eastern central St. Thomas, U.S. Virgin Islands.

In July 1987, a strong petroleum odor was detected in the Tillet Well, a public supply well in the area. At the request of the Virgin Islands Department of Planning and Natural Resources (VIDPNR), EPA sampled over 100 wells in the area. Volatile organic compounds such as benzene, toluene, trans-1,2-dichloroethene, trichloroethene (TCE), and tetrachloroethene (PCE) were detected in several public supply, institutional, commercial, and private wells. Water from several commercial wells in this area was hauled to other parts of the island. The Tillet Well, three private wells, and 13 commercial wells subsequently closed down, and alternative sources of water, including trucking water to the area, were made available.

In July and September 1987, VIDPNR issued Administrative Orders on Consent to Tutu Texaco Service Station and Tutu Esso Car Care Center to investigate the release of petroleum from their underground storage tanks (USTs). In August 1987, EPA identified seven more potentially responsible parties (PRPs): one other gasoline service station (Rodriguez Auto Parts), two vehicle maintenance repair stations (Ramsay Motor Co. and Consolidated Auto Parts/Gasset Motors), two Territorial government agencies (Virgin Islands Housing Authority and Department of Education, formerly the Laga Building), a dry cleaner (O'Henry Cleaners), and a silk screening operation (Jim Tillet, Inc./Tillet Gardens). Potential sources of hazardous substances at these locations include petroleum and waste oil USTs, drum storage areas, contaminated catch basins, oil separators, floor drains, a sump holding tank, a leaching pit, above-ground tanks, and an evaporation pit. Wastes that may have been disposed of include solvent-based auto flushes, treatments, degreasers, cleaners, and lubricants; antifreeze; kerosene; hydraulic fluid; waste oils; s █ | PCE waste and filters; dry cleaning fluids such as 2-butoxyethanol, hexylene glycol, and dye stripper; ammonium hydrox █ : and mineral spirits. In September 1987, EPA used CERCLA emergency removal funds to decontaminate five residential cisterns, provide alternative water supplies, and monitor local wells.

Since August 1987, EPA has detected many of the same chemicals found in drinking water wells in the soils on the properties of several of the PRPs. Semivolatiles such as phenols and polyaromatic hydrocarbons were also detected at a few of these properties, as was cadmium. An estimated 1,600 people formerly obtained drinking water from public and private wells within 4 miles of the site.

In March 1990, EPA issued a unilateral Administrative Order to O'Henry Cleaners, Esso Standard Oil Co., and Texaco Caribbean, Inc., to take over EPA's removal action. In September 1990, the three companies began the monitoring program and arranged with the Virgin Islands Housing Authority to extend water lines to owners of the four contaminated private wells.

Tutu is located in the Upper Turpentine Run Basin. An intermittent stream leading to Turpentine Run is within a few hundred feet to the southwest. Turpentine Run flows southward approximately 2.8 miles to Mangrove Lagoon, which is hydraulically connected to the Caribbean Sea. The Atlantic Ocean lies approximately 1 mile to the north.

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## **TULALIP LANDFILL Marysville, Washington**

The Tulalip Landfill covers approximately 146 acres on the Tulalip Indian Reservation near Marysville, Snohomish County, Washington. The site is bounded by Ebey Slough to the north, Steamboat Slough to the south, and Possession Sound to the west. All these surface water bodies flow into northern Puget Sound, a Federally designated National Estuary. This area is highly productive for salmon and shellfish and provides habitat for Federally-threatened species.

In 1964, the Tulalip Tribe leased the land to Seattle Disposal Co. The company accepted municipal, industrial, and hospital waste from the greater Seattle area. The site (originally a wetland) was cleared and canals were cut into the site, allowing waste to be barged in from Seattle. Eventually the barge canals were filled with waste. An estimated 4 million cubic yards of waste were deposited at the site from 1964 to 1979, when the landfill was closed in accordance with a Federal consent decree.

In February 1988, EPA conducted an extensive inspection of the site and the surrounding environment. Ground water, wetland water, and slough water contained heavy metals (including lead, copper, chromium, and cadmium) in excess of EPA's Maximum Contaminant Levels established under the Safe Drinking Water Act and marine Ambient Water Quality Criteria established under the Clean Water Act. An estimated 7,800 people obtain drinking water from private and municipal wells within 4 miles of the site, the nearest within 0.9 mile.

EPA also found elevated levels of metals, volatiles (including toluene and xylene), semivolatiles, and PCBs in leachate and pooled water on-site. Numerous strains of opportunistic pathogens were detected in leachate, pooled water, and slough samples. These opportunistic pathogens, due to infiltration of estuarine water rich in nutrients and dissolved oxygen, are resistant to several antibiotics and can therefore survive for years.

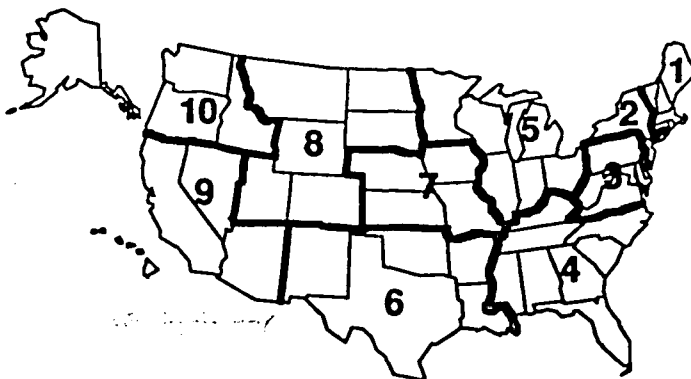
In 1987, EPA issued a modified permit under the National Pollutant Discharge Elimination System (NPDES) requiring, among other items, the Tulalip Tribe to collect all leachate generated by the site and transport it off-site for treatment. The Tribe has not complied. An estimated 10 million to 90 million gallons of leachate are generated per year. During a December 1990 NPDES inspection, EPA found the site was receiving demolition debris not previously approved for disposal. Logs recently placed on-site were generating colored liquids. The Tribe has discontinued disposal of all demolition debris at EPA's request.

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For further information, call the Superfund Hotline, toll-free 1-800-424-9346 or (703) 920-9810 in Washington, DC metropolitan area, or the U.S. EPA Superfund Regional Offices listed below.\*

For publications, contact  
Public Information Center, PM-211B  
401 M Street, SW  
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(202) 260-2080

Office of Emergency and Remedial Response, OS-5204G  
United States Environmental Protection Agency  
401 M Street, SW  
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### Region 1

Connecticut New Hampshire  
Maine Rhode Island  
Massachusetts Vermont

Waste Management Division, HAA-CAN-1  
John F. Kennedy Federal Building  
Boston, MA 02203-2211  
(617) 573-5707

### Region 2

New Jersey Puerto Rico  
New York Virgin Islands

Emergency and Remedial Response Division  
26 Federal Plaza  
New York, NY 10278  
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District of Columbia Virginia  
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Site Assessment Section, 3HW73  
841 Chestnut Building  
Philadelphia, PA 19107  
(215) 597-8229

### Region 4

Alabama Mississippi  
Florida North Carolina  
Georgia South Carolina  
Kentucky Tennessee

Waste Management Division  
345 Courtland Street NE  
Atlanta, GA 30365  
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### Region 5

Illinois Minnesota  
Indiana Ohio  
Michigan Wisconsin

Waste Management Division  
77 West Jackson Boulevard, 6th Floor  
Chicago, IL 60604  
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### Region 6

Arkansas Oklahoma  
Louisiana Texas  
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Hazardous Waste Management Division, 6H-M  
1445 Ross Avenue  
Dallas, TX 76202-2733  
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### Region 7

Iowa Missouri  
Kansas Nebraska

Waste Management Division  
726 Minnesota Avenue  
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(913) 551-7062 or 551-7595

### Region 8

Colorado South Dakota  
Montana Utah  
North Dakota Wyoming

Hazardous Waste Management Division, 8HWM-SR  
999 18th Street, Suite 500  
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### Region 9

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Waste Management Division, H-1  
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### Region 10

Alaska Oregon  
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Hazardous Waste Division, HW-113  
1200 6th Avenue  
Seattle, WA 98101  
(206) 553-1677

\* All EPA telephone and telecommunications systems may be accessed via the Federal Telecommunications System (FTS).