WESTLEY TIRE FIRE, STANISLAUS COUNTY, CALIFORNIA

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ABSTRACT: *This is a case study of U.S. Environmental Protection Agency (EPA) emergency response actions taken at one of the largest tire fires in California. The site was an illegal scrap tire dump known as the Filbin Tire Pile. There was an estimated 7 million tires in the pile. The site was located in a canyon in the rolling hills above the San Joaquin Valley near the Town of Westley, California. This tire fire was considered a major environmental disaster where large populations were affected and there was a potential for severe environmental damage. Responders with past experience recognized that the tire fire would be a unique multi-category event containing the elements of a major fire: hazardous materials release and oil spill discharge combined into one event. Shortly after the fire ignited the tires began to pyrolyze, producing a steady stream of oil that discharged to an unnamed drainage in the hills above the valley. The oil in the drainage flashed sending great plumes of thick black smoke into the valley. The oil and tire fires quickly overwhelmed the resources of the local fire departments. The EPA On-Scene Coordinator (OSC) immediately responded using federal authority to respond to and, if necessary, remove a discharge of oil or a hazardous substance under the Clean Water Act (33 U.S.C. 1321(c)) as amended by the Oil Pollution Control Act of 1990 (OPA 90). Some of the most difficult problems that were encountered included making decisions on fire suppression tactics; conducting safe operations in extremely hot and unstable fire conditions; maneuvering heavy equipment on steep slopes, and deep and spongy tire piles; controlling massive volumes of oil and water runoff; coordinating with local and state governmental agencies; forming a fully integrated and effective Incident Command System led by a Unified Command (ICS/UC); and recycling of pyrolytic oil under current California hazardous waste regulations.*

The situation

On January 22, 1999, a rare lightning storm moved into the San Francisco Bay area. Hundreds of lightning strikes were recorded. One lightning bolt struck a metal ramp and ignited the tires in the Filbin Tire Pile near the town of Westley. The fire roared down the canyon with a 200-foot high fireball leading the conflagration. Temperatures were over 2,000°F. The smoke plume formed a tornado-like vortex lifting the smoke upwards in a spiraling chimney reaching 6,000 feet in altitude. The ash and soot fallout was reported as far as 60 miles away. Rains mixed with ash and soot fell as black rain over the San Francisco Bay area. The tire dump contained an estimated 7 million scrap tires piled on steep slopes of the canyon. The fire spread quickly and engulfed most of the main tire pile. The tremendous smoke plume from the tire fire impacted nearby farming communities and caused widespread concern of potential health affects from exposure to the smoke emissions. The tire fire produced large volumes of pyrolytic oil that flowed off the slope and into the drainage of an intermittent stream. The oil runoff was initially contained behind an existing stock watering pond consisting of a small earthen dam and impoundment structure. A reduction in smoke emissions was evident as the tire fire entered into the smoldering stage. The initial decision by the local fire departments was not to use water and foam to extinguish the fire because of containment and environmental concerns. Governmental agencies were concerned about the containment of massive volumes of oil and contaminated water runoff and impacts to surface and ground water.

On day 2, the fire department declared the fire contained in the canyon. The fire had progressed through several stages that were typical of most tire fires. The ignition/propagation phase was characterized by high open flames, high temperatures, and flammable vapors. At this stage, there was an incredible amount of energy released, which manifested itself as a cyclonic tornado-type vortex that generated tremendous heat and winds. The smoke was lifted in a column thousands of feet into the air. During the compression stage, the tires lost their rigidity, settled, and began to collapse in on themselves. Both heat and smoke increased at this stage. As the tires melted down, the ash, bead wire, and steel belts formed a solid crust layer over the top of the pile. At this stage it was a deep-seated fire, slower burning, and producing less smoke emissions. Tires deep in the pile were pyrolyzing, and oil was flowing from the bottom of the pile. Pyrolysis was producing oil by thermal decomposition of the tires in the absence of air. The average passenger tire contained an equivalent of 2 gallons of oil. The Filbin Tire Pile contained 7 million tires or 14 million gallons of oil. For comparison, the largest U.S. oil spill was the *Exxon Valdez*, which spilled 11 million gallons of oil into Prince William Sound, Alaska. Although the fire consumed vast quantities of oil, there was still a serious threat of a large oil discharge from this large burning tire pile.

The response strategy at this point was to maintain firebreaks around the piles and monitor. Water was sprayed on the unburned tire piles to cool and prevent the spread of the fire into these areas. Oil runoff was contained in the existing stock watering pond located about 100 yards downstream from the fire. The state mobilized their contractor and began removing the oil with vacuum trucks and transferring the oil to 20,000 gallon capacity storage tanks.

EPA response action

On day 6, the burning tires in the drainage ignited the oil flowing in the stream. The oil fire ignited a pile containing thousands of tires across the drainage, and a grassland fire erupted that charred 1,200 acres. The large oil fire significantly increased the smoke emissions and a local climatic inversion caused ground impacts. The response to the oil and tire fires quickly overwhelmed the resources of the local and state agencies. The day turned into darkness as the black smoke blocked out the sun. A number of people complained of symptoms related to exposure to the smoke including headaches, vomiting, nose bleeds, breathing difficulties, seizures, and coughing up blood. Persons with respiratory problems were advised to shelter-in-place, school recess and sports activity were canceled, farmers were dumping produce covered with soot because it was too costly to wash.

The state no longer had sufficient resources to continue oil recovery operations. The On-Scene Coordinator (OSC) determined that this was an unacceptable situation. The OSC immediately initiated a federal response using federal authority to respond to and remove a discharge of oil or a hazardous substance under the Clean Water Act (33 U.S.C. 1321(c)) as amended by the Oil Pollution Act of 1990 (OPA 90). The OSC mobilized the U.S. Environmental Protection Agency's (EPA) contractors and the U.S. Coast Guard Pacific Strike Team. On the recommendations of the Coast Guard, the OSC directed EPA's cleanup contractor, IT Corporation, to subcontract the services of Williams Fire and Hazard Control (Williams) to fight the oil fire. Williams was formerly part of the famed Red Adair's Boots and Coots hellfighters. Williams had over 50 years of experience in putting out oil fires all over the world and extinguished the oil well fires during the Persian Gulf War.

On day 8, Williams arrived on-scene and began battling the oil fire. The initial fire suppression strategy was to extinguish the oil fire, prevent reignition of the oil fire, and reduce smoke emissions as much as possible without endangering the responders. Williams quickly extinguished the oil fire in 2 days. For the flammable liquid firefighting, Williams used a Daspit Tool[tm], a new portable monitor on legs developed by Williams that was capable of flowing up to 500 gpm of water and foam solution. A 3% aqueous film forming foam (AFFF) manufactured by 3M Company was used for the attack on the hydrocarbon fire. The oil in the drainage continued to boil, and AFFF was reapplied to place a foam blanket and control vapor emissions to reduce the possibility of reflash. A buffer or cooling zone was created by removing burning tires from the stream in the lower canyon up to the first steep slope. The burning tires were moved by excavators to work areas that were leveled on both sides of the stream. The smoldering debris was spread out over the area in thin lifts by the dozers and doused with water and foam. A pit was deepened above the road culvert to catch oil flowing from the tire pile. A 30-foot length of 10-inch pipeline was installed below the culvert in the streambed to convey oil to the retention pond. Should the oil flowing from the pile reignite, the flow of oil through the pipe would encounter an oxygen deficient atmosphere and be snuffed out and cooled before entering the pond. Burning tires on relatively level areas in the lower part of the canyon were extinguished up to the first steep slope further reducing smoke emissions.

During this phase, there was constant reassessment of tactics that could be used to attack the deepest portion of the tire pile. The tires were piled against the canyon wall as high as a 10-story building. The slopes were very steep and unstable; tires were collapsing under extreme temperatures. The large quantities of water that would have to be applied to extinguish the fire could overwhelm the containment structures and produce millions of gallons of contaminated water runoff that would have to be removed. Additionally, EPA's past experiences with using water and foam extinguishing methods on large tire fires proved unsuccessful.

Other suppression tactics were assessed and rejected because of concerns about the safety, effectiveness, health, and environmental impacts. The alternatives considered included allowing the fire to burn itself out, deny oxygen to the fire by covering the tires with dirt or injecting carbon dioxide or cryogenic gases (i.e., liquefied nitrogen), or use an accelerant forcing the tires to burn more rapidly. The public was very vocal and critical of any decision that called for letting the tire fire burn and emit toxic smoke for years. The OSC had the ultimate responsibility for the safety of the response workers. No decision would be made to send in personnel and equipment into the high danger areas until the OSC was convinced that it could be done safely and effectively.

The firefighters continued to extinguish burning tire debris in relatively safe areas below the steep slopes of the hillside. As Williams approached the first slope the excavator operator dug along the outer fringe of the burning pile to explore how far the fire had progressed into the pile. It was discovered that the fire had penetrated only 7–10 feet into the pile. The OSC surmised that the reason why only the top of the pile was burning was because the tires were piled on steep slopes, allowing the oil to flow away from the seat of the fire. This resulted in a much slower burning pile because the fire was being robbed of fuel. Additionally, a crust of steel and melted rubber formed over the top of the pile reducing airflow through the pile. Under these circumstances, it would be reasonable to predict that the tires, and oil that had seeped into the soil, would continue to burn slowly for a long period of time since there were millions of unburned tires remaining in the pile. Armed with this information, a firefighting strategy was developed for separating and extinguishing the top layer of burning tires.

Firefighting on the slopes required the largest heavy equipment that could be found. This included giant excavators, long-stick trackhoes with 70-foot reach, tracked dozers, front-end loaders, and dump trucks. Williams brought in larger pumps and Daspit Tools that were portable and mounted on trucks. Several 2,000 gpm monitors Hired Guns[tm] were used to attack the fire from the bottom and top of the canyon. Williams used new foam on the market, structural firefighting foam (SFFF) manufactured by the 3M Company, to penetrate and extinguish the 3-dimensional deep-seated fires. This foam proportioned at 1% had the ability to greatly reduce the surface tension of water, which allowed it to penetrate quickly to the seat of the fire for effective extinguishment. The ridge team used large-volume high-pressure monitors to hydromine the burning debris and wash it down the steep slopes to the excavators. The excavators would pick up and toss the burning debris in the air while the ground team doused the debris with foam.

The Komatsu 1100 Big Girl would move the smoldering debris to the bottom of the hill. The Komatsu literally moved mountains of burning tires and debris in a safe and effective manner. A ground team using long-stick trackhoes reached across the stream and loaded debris into their buckets. The hot debris was quenched in slurry pits that had been dug into the streambed. It was very important to submerse the debris in water because the wire and steel in the melted tires were still very hot. In fact, a small fire was reignited in a large debris stockpile by hot steel that was not quenched prior to removal. The quenched debris was loaded into end dumps and hauled to several stockpiling areas. The local volunteer fire department was subcontracted to provide a night watch to contain the fire so that it did not spread back into areas previously extinguished during the day. The fire was totally extinguished in 27 days. A total of 38,000 gallons of foam were used at a cost of $607,000.

All oil and water runoff was successfully contained behind the earthen dam. Vacuum truck operators worked all day to skim oil off the surface of the pond. The oil was transferred to 20,000-capacity storage tanks. Approximately 80% (200,000 gallons) of the oil generated by the fire occurred within the first 10 days. Once the optimum conditions for pyrolysis were reached oil flowed at a high rate in a short period of time.

Early in the response the EPA contractor was directed to research disposal options for the pyrolytic oil. Oil samples were submitted to an analytical laboratory to determine the chemical and physical properties of the oil. The analytical results indicated that the oil was similar in composition to used crankcase oil. The volatile organic compound (VOC) concentrations were higher in the pyrolytic oil but comparable to the concentrations found in many fuel oils. The metal concentrations in the oil were below the federal and state regulatory threshold levels for hazardous waste. The heating value of the pyrolytic oil was 17,000 BTUs per pound, which was between the heating values of coal and No. 6 fuel oil. The figure shows a comparison between the composition of pyrolytic oil and used oil.

Pyrolytic oil		**Used crankcase oil**	
Benzene	880 ppm	Benzene	20 ppm
Toluene	2,600 ppm	Toluene	380 ppm
Xylene	2,100 ppm	Xylene	550 ppm
Napthalene	710 ppm	Napthalene	330 ppm
Lead	3.4 ppm	Lead	240 ppm
Zinc	830 ppm	Zinc	480 ppm
Flashpoint	120°F	Flashpoint	>140°F

Based on these results, the OSC directed the contractor to focus their effort on recycling the oil. The OSC's preference was to send the oil to a local refinery. The oil would be added to the existing feedstock and processed into fuel oil. This had been done by other EPA regions and, in some cases, the refinery paid for the oil. A small local refinery, Huntway Refinery in Benecia, California, indicated an interest in taking the oil at no cost.

The state notified the OSC that the oil would have to be classified as a "hazardous waste" under California hazardous waste regulations. The classification was based on the oil exceeding the state regulatory threshold levels for benzene, ignitability, and aquatic toxicity. The oil failed the 96-hour fish bioassay test. These levels were not unusual for many recycled petroleum products. Since the refinery was not permitted to accept hazardous waste, the OSC requested the state to issue a one-time emergency permit to the refinery. The state would not grant the permit. The basis for not issuing the permit remains unclear. Under state regulations, Cal-EPA may issue emergency permits to a nonpermitted facility when there is an imminent and substantial endangerment to human health or the environment. The situation at the site became critical because of lack of storage tank capacity.

Using emergency authority under the National Contingency Plan (NCP), the OSC transported 60,000 gallons of oil to a licensed oil recycler in Newark, California. Prior to the oil shipment, a sample was provided to the oil recycler. They tested the oil and found it to be acceptable under the conditions of their permit. The oil was manifested as Used Oil, Non-RCRA Hazardous Waste. Further shipments of oil to the oil recycler were halted after Cal-EPA began enforcement action against the oil recycler for violation of their permit for accepting the pyrolytic oil.

Cal-EPA recommended three oil-recycling companies in California that were authorized to take the oil. One oil recycler declined to participate, while another was determined to be in noncompliance with regulatory requirements. The third recycler agreed to take the oil at 96 cents per gallon. The total charges for recycling were $1.08 per gallon with the total expenditure of $271,000 for recycling as a blended fuel source. Had the oil been recycled as a feedstock material at a petroleum refinery the only cost would have been the cost of transportation. EPA manifested the oil to the recycling company as RQ Waste Flammable Liquid N.O.S. (RQ benzene). The company remanifested the oil at their East Palo Alto facility and transported the oil to the Port of Redwood City. The oil was then transferred to railcars and shipped to Fedonia, Kansas. There, the oil was transported to a cement kiln and used as a supplemental fuel source in the manufacturing of cement. EPA removed over 250,000 gallons of pyrolytic oil. The enforcement action taken against the first recycler was later rescinded by the state after EPA voiced strong objections.

During the final phase of the OPA 90-response action, there was a transition period where EPA transferred the lead agency role to the state. The California Integrated Waste Management Board (CIWMB) authorized funding for site winterization activities. CIWMB immediately mobilized their contractor to prepare the site for the winter. The governmental agencies were concerned that California could experience an El Nino season involving heavy winter storms that could generate significant runoff problems. Runoff from the 800 acres of watershed could deluge the site, overwhelm the existing containment structure, and mix with the contaminated soil and ash. High volumes of essentially a contaminated slurry would create disposal problems.

A plan was developed to impound runoff water in several tributary canyons and build pipelines that would convey the water through the site and discharge downstream. The contractors constructed small coffer dams in two of the largest tributaries and 2-mile long aboveground pipelines to transport clean water impounded behind the dams to a discharge point below the contamination zone. EPA provided assistance to CIWMB by completing two projects prior to demobilization. EPA's contractor was directed to construct a large storm water retention pond upgradient of the stock-watering pond. Additionally, EPA's geotechnical consultant developed an erosion control plan that was implemented by the CIWMB. The slopes were recontoured and hydroseeded to reduce erosion.

Conclusions: Lessons learned

Fire suppression tactics. This was the first successful extinguishment of a large tire fire using water and foam as the sole suppression method. The use of portable high-pressure high-volume monitors working in tandem with large excavators to overhaul burning tire debris by technical specialists was the key to the effectiveness of this method. The method was effective but very costly. The total EPA cost to extinguish the tire fire and contain, collect, and dispose of the pyrolytic oil was $3.7 million. This did not include the costs for local and state response actions, public health and economic impacts, reimbursed third party claims, site characterization, and remediation. The estimated cost to remediate the site ranged from $10–30 million.

The Williams patented portable monitors rated at 2,000 gpm were crucial to the successful suppression of the tire fire and provided the safety cushion necessary for personnel to continue working in the fire zone. A new foam product from 3M Company, SFFF (Class A Foam), was notably superior to other products according to Williams.

The public was very critical of the initial response actions and demanded to know why the government was not evaluating all conceivable methods for quick extinguishment of the fire. A fire suppression group should be formed early in the response to consider the pros and cons of different fire suppression strategies.

Each firefighting strategy should take into account safety, effectiveness, resources, cost, duration, health, and environmental impacts. The evaluation process should be documented to enable the command to communicate the basis for implementing (or not implementing) a specific strategy. This would help to quell the critics.

Fire suppression using water and foam generated large volumes of oil and 4 million gallons of water runoff that had to be contained and managed. Responders were very fortunate to have an existing downstream containment structure. Without this, they would have been forced to quickly build a dam and surface impoundment to contain the runoff. Even with the existing containment, they had to construct water catchment basins to slow the runoff flows and a wastewater recirculation system to reduce the amount of water used. A wastewater recirculation system was used to recycle and conserve firefighting water for reuse and prevent overflow to the containment pond. Also, VOCs eventually were reduced to nonhazardous levels by volatilization.

The logistics of sustaining a continuous supply of foam was a monumental task. The quantity of foam required to extinguish a large tire fire was not available locally or regionally. The Williams logistical network for foam supply was a critical element in the success of the response.

Incident Command System. The Incident Command System/Unified Command (ICS/UC) is the most effective method to involve local, state and federal agencies and the responsible party. It is a response management organization that maximizes coordination between multiple agencies and jurisdictions. However, it was very difficult to organize participating agencies into an ICS/UC at the Westley Tire Fire incident. Emergency response personnel from environmental agencies were unfamiliar with the principles of ICS/UC and never had formalized training. An effective ICS/UC was not established, which led to a breakdown in communication and coordination in some areas. The areas that suffered the most were community relations, public affairs, information flow, health assessments, and risk communication.

The local government took responsibility for community relations, public affairs, medical advice, and information on the response through their public information hotline and Web site. Most of these activities occurred outside the ICS/UC, and there was no oversight by the UC. The community expressed a high level of concern and fear about health affects. At the same time there was a lot of distrust and resentment toward public officials who they blamed for creating the problem. Community meetings were disastrous. An effective ICS/UC is one that is able to share resources and expertise to address these issues.

There are great advantages to collocating essential functions and maintaining information flow into and out of a central source, i.e., Unified Command. Local officials would have gained more credibility and trust with the community if the public perceived that there was a unified and concerted effort by all federal, state and local agencies to mitigate the incident using all available resources in a timely manner.

The state has not designated a lead agency nor identified the Incident Commander (IC) for off-highway oil and hazardous material incidents as have been done for highway and marine spills. State participation in the UC was minimal. Additionally, the state representative lacked the authority to make decisions on behalf of the state, weakening the power of the UC. A state IC should have been able to request the presence of regulatory personnel to quickly resolve issues related to oil waste classification and emergency permitting, and saved the government over $250,000 in recycling costs.

State and local agencies are not always capable of committing individuals to a long-term response and choose to manage the response from the office. The incident must be managed in the field. State and local agency personnel with IC responsibilities must be able to disengage from normal duties, and be present on a daily basis to expedite issues critical to the UC.

It was important to take the time and have a full-blown multiagency meeting very early in the response. This is the time to provide an overview of the incident and discuss coordination issues. If needed, this would be a good time to have a response management support team establish a credible ICS/UC. Additionally, local government would benefit from a knowledgeable liaison officer who could explain the relationship between local, state, and federal resources and authorities.

Serious problems can occur if an agency not participating in the UC takes a unilateral action without consultation with those managing the emergency. A state agency issued a cleanup order to the responsible parties during the emergency requiring work activities that would have interfered with the response.

The federal and state emergency response plans do not adequately describe how federal, state, and local agencies will coordinate and work together in an effective manner during a response to a large scale oil or hazardous materials incident involving multiple agencies, multiple jurisdictions, and authorities. They do not clearly delineate agency roles and responsibilities, capabilities, and limitations. These plans need to incorporate procedures for making the transition from the initial crisis response phase involving the preservation and protection of life and property to the pollution phase involving the cleanup of the spill. In the first phase the responders typically include local fire, police, and health officials. In the second phase, the response group can get much larger as environmental agencies from federal and state government arrive at the scene. There can be a complete transfer of command from law enforcement or fire agencies to the environmental agencies. It is at this point that the response plans are not clear as to which state or local agencies will be the lead and support agencies for the unified command. Most local police, fire, and health agencies do not possess the expertise and sustaining resources needed to direct and manage a large pollution response effort. Because the state has limited capability and resources to abate, mitigate and manage a major spill event, the federal emergency response programs will continue to play a significant role at these types of responses under their CERCLA and OPA 90 authorities.

Health and safety. The development of health and safety procedures was a high priority. OSHA requires that each response organization develop a site-specific Health and Safety Plan for their employees. The OSC determined that a Unified Site Safety Plan be appropriate and should be developed jointly by qualified agency and contractor personnel. This provided uniform and consistent safety policies and procedures for all responders.

All personnel attended daily tailgate safety meetings. All personnel were encouraged to raise concerns and provide feedback on safety issues. The use of full-blown daily safety meetings to stress proper safety procedures cannot be overstated. The author is convinced that these meeting were taken seriously, and, as a result, there were no injuries during the response, which involved highly dangerous operations over a span of 27 continuous days. Additionally, the use of Coast Guard Strike Team members as safety monitors inside the exclusion zone contributed to a safe operation.

This did not mean that there were not periodic breakdowns in safety procedures. There was some breakdown in coordination between the environmental cleanup contractor and Williams firefighting operations. In one case, an overenthusiastic water truck driver tasked to do dust suppression on roadways decided to attack a hot spot and slid off the road into smoldering tires. Another incident involved a dozer operator moving burning debris into a pile and got stuck. In both cases, the drivers escaped unharmed, but Williams had to stop their operation to rescue the equipment. The OSC made it clear that in the fire zone, Williams was in operational control of all activities occurring in the fire zone. Additionally, no operations would occur in the fire zone unless there was an adequate water supply, delivery system and rescue capability.

Battling tire fire of this magnitude requires an experienced firefighting team. There has to be a tremendous amount of trust between the equipment operators and firefighters. The operator cannot see because of the smoke and there are fireballs around him. Magnesium rims triggered many of the fireballs. He must know that they are going to cover him and keep him cool.

Recommendations. EPA should initiate interagency preincident planning workshops to improve overall response capabilities. These workshops could be used to scope out how various federal, state, and local agencies would coordinate during a response to a large incident. Some ideas for this include the following:

- Develop conceptual ICS organizations for multiagency response to large-scale oil and hazardous material spills
- Establish generic response functions that commonly occur at oil and hazardous material spills
- Identify each agency or group that will respond and their functional role in the ICS command or general staffing positions
- Establish operational guidelines for all response personnel (i.e., commitment to work in the field, share resources, follow chain-of-command, maintain flexibility, build consensus, etc.)
- Prescript initial actions to some degree by developing a short list of generalized objectives that will guide a large response organization during the early stages of the response
- Consider preassigned responsibilities and other ways to speed up the response and ensure the response organization will be cohesive, effective, and sustained
- Jointly develop and deliver training courses on ICS that emphasize the uniqueness and complexity of inland oil and hazardous materials response
- Establish procedures for making the transition from the crises (panic) phase to the pollution response (project) phase
- Educate local governments on the use of ICS and how to smoothly integrate environmental agencies into an existing ICS
- Consider the use of a incident management team to help establish a functional ICS when the need arises
- Develop methods for making the lessons learned process work better and use them to improve coordination and response capabilities
- Establish a Joint Information Center (JIC) on-scene to control the flow of information, enabling the UC to provide accurate information from a single source and accounting for their interests of federal, state, and local stakeholders
- Consider establishing advance agreements that identify jurisdictional and functional responsibility and delineate the elements of the UC structure

Biography

Daniel M. Shane received his Bachelor of Science degree in Environmental Studies from San Jose State University. He began working with EPA Region IX in 1982 and has been an OSC with the region since 1985. Prior to working with the EPA, Mr. Shane was employed by the Illinois EPA. From 1982–1985, he conducted RCRA inspections at hazardous waste treatment, storage, and disposal facilities. As an OSC, he has responded to numerous incidents involving the release of oil and hazardous substances including several large tire fires such as the Panoche Hills Tire Fire in Fresno County, California and the Ordot Landfill Tire Fire in Guam.