

US EPA ARCHIVE DOCUMENT

WESTLEY TIRE FIRE
WESTLEY, STANISLAUS COUNTY, CALIFORNIA
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Abstract

On September 22, 1999, a lightning strike ignited a fire in the Filbin tire pile located in a canyon in a coastal mountain range. The tire dump contained an estimated seven million scrap tires piled on the east slope of the canyon. The fire spread quickly and engulfed most of the tire pile areas. 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 pyrolitic oil that flowed off the slope and into the drainage of an intermittent stream. The oil runoff was initially contained behind an existing small dam and impoundment structure. A reduction in smoke emissions was evident as the tire fire entered into the smoldering stage.

The fire in the tire piles within the drainage ignited the oil flowing in the stream. The large oil fire significantly increased the smoke emissions and a local climatic inversion caused the smoke to remain close to ground level. A response to the oil and tire fires was beyond the capabilities of local and State agencies. The U.S. EPA On-Scene Coordinator (OSC) immediately responded using Oil Pollution Act of 1990 (OPA) authority. The OSC quickly mobilized EPA's contractors and the U.S. Coast Guard Pacific Strike Team. EPA's cleanup contractor, IT Corporation, was directed to subcontract Williams Fire and Hazard Control (formerly Boots & Coots) to fight the oil fire. Due to the geographic setting, the oil flowed away from the tire piles resulting in a slower burning fire. It was discovered that only the top ten feet of tires were burning. A tactical plan was developed to implement a safe and effective suppression of the fire. Large excavators and special foam delivery apparatus were used to extinguish fires one slope at a time while moving up the canyon. It took 30 days to extinguish the fire.

Over 250,000 gallons of pyrolytic oil was recovered from the retention pond. An estimated 4 million gallons of contaminated fire fighting water was impounded on site in a series of constructed basins within the drainage channel. Total EPA response costs was about \$3.5 million. Future work will involve site winterization, characterization and remediation. The response action was highly successful. Some of the most difficult problems that were encountered included extremely hot and unstable fire conditions, heavy equipment operations on steep slopes, deep and spongy tire piles, controlling massive volumes of oil and water runoff, California waste classification and recycling of the pyrolitic oil.

Presentation Outline for 2000 Freshwater Spills Conference

Westley Tire Fire
Westley, Stanislaus County, California
September/October, 1999
OSC Dan Shane, U.S. EPA Region 9

I. Introduction

Rash of tire fires in Region 9 in past several years
Each tire fire incident presents a unique set of circumstances
The type of response depends on the circumstances

II. Situation Description

Background

Physical setting
Characteristics of the tire dump
Cause of Fire and Fire Dynamics

Potential Threats

Toxic air contaminants affected local communities
Pyrolytic oil threatened stream, aqueduct and canal
Contaminants threatened soil and ground water resources
Smoke threatened PG&E Intertie Transmission Line

III. Practical Response Actions

Establishing Incident Command

Initial response by local and State officials
Transition to a Unified Command

Fire Suppression Tactics

First responders decision to let it burn
Oil fires and Williams Fire and Hazard Control
OPA activation and contractor mobilization
Fighting the oil and tire fires
Use of water and foam to extinguish the fires
Use of specialized foam delivery equipment
Heavy equipment operations
Community involvement

Assessing and Managing Runoff

- Production and composition of pyrolytic oil
- Downstream containment of oil and water runoff
- Collection, removal and storage of oil
 - Recycling of oil and problems encountered
- Management and reuse of wastewater runoff
- Health concerns

IV. Site Winterization Activities

- Concerns of stormwater runoff during the winter and spring rains
 - Construction of coffer dams, diversion pipelines and stormwater basins
- Erosion control and hydroseeding
- Wastewater management plan

V. Transition of Response to Cal-EPA

VI. Site Remediation Issues

- Millions of unburned and partially burned tires left in drainage
- Large quantity of contaminated debris (mixture of ash, wire and soil)

- Characterizing contamination in soils and groundwater
 - Remedial alternatives being considered

VII. Response Authorities, Enforcement and Costs