

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, S.W.
ATLANTA, GEORGIA 30303

\$250,000 Emergency Action Memorandum

SUBJECT: Action Memorandum for an Emergency Response Removal Action at the Summerville Mill Fire Site pursuant to the On Scene Coordinator's delegated authority under CERCLA Section 104

FROM: Leo Francendese, OSC
Emergency Response and Removal Branch

THRU: Shane Hitchcock, Chief
Emergency Response and Removal Branch

TO: Site File

I. Purpose

The purpose of this memorandum is to document the decision to initiate emergency response actions described herein for the Summerville Mill Fire Site (the Site) located in Summerville, Chattooga County, Georgia pursuant to the On Scene Coordinator's delegated authority under CERCLA Section 104.

II. Site Information

A. Site Description

Site Name: Summerville Mill Fire
Superfund Site ID (SSID): B4T7
NRC Case Number: 1019202
CERCLIS Number: GAN000410865
Site Location: 850 Raccoon Creek Rd, Summerville, Ga 30728
Lat/Long: 34.4507850, -85.3864290
NPL Status: Non-NPL
Removal Start Date: July 27, 2012

B. Site Background

1. Removal Site Evaluation

After dispatch by the Region 4 Duty Officer on the evening of July 27th 2012, the OSC contacted the County EMA director and was informed that the incident was an "all resources to bear" response. The OSC requested the Superfund Technical Assistance and

Response Team (START) to contact the Interagency Modeling and Atmospheric Assessment Center (IMAAC) in order to determine the potential extent of the airborne plume of a reported large plastics fire. En route to the fire, the OSC was provided information by IMAAC estimating the potential size and chemical characteristics of the plume, including the portion of which displayed unacceptable air quality.

Polyethylene terephthalate (PET) plastics fires can create dangerous inhalation risks due to the creation of carbon monoxide, BTEX compounds, acetaldehyde, numerous semivolatile compounds, as well as straight chain and bent aliphatic hydrocarbons. Volatile organic compounds (VOCs) such as benzene, toluene, ethylbenzene and xylene (BTEX) compounds are typically consumed in the oxidative portion of the fire, but complete oxidation typically only represents a small part of combustion. Components of incomplete combustion, also known as pyrolysis, which includes airborne particulates in the 2.5 micrometer range as well as semivolatile compounds, overwhelmingly drive the inhalation risk manifest by such fires. In consideration of these factors, the OSC elected to manage both the known risk of elevated particulates and the unknown risk of pyrolytic byproducts such as SVOCs by collecting PM_{2.5} data in addition to monitoring for carbon monoxide and VOCs, during the course of the fire. The PM_{2.5} data was the primary tool used to make recommendations to the Incident Management Team (IMT) concerning public health advisories. The factsheet used by the OSC for evaluating particulate monitoring results and making recommendations to the IMT is included as an attachment to this action memo.

The fire also significantly threatened a warehouse containing a large quantity of shredded polyvinyl chloride (PVC) which was identified by the owner. A large release of the hazardous substances, vinyl chloride and airborne hydrochloric acid as well as numerous chlorinated SVOCs would have resulted from the fire spreading to this structure. This structure was within minutes of igniting during the midday firefighting efforts on the 28th until firefighters extinguished it.

2. Physical Location and Site Characteristics

The Site is a plastics recycler located in Summerville, Chattooga County Georgia at 850 Raccoon Creek Rd. It is an approximate 10 acre facility located immediately adjacent to Raccoon Creek and within a residential community.

3. Release or threatened release into the environment of a hazardous substance, pollutant or contaminant

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III. Threats to Public Health, Welfare or the Environment

A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants

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B. Applicable factors which were considered in determining the appropriateness of a removal action (40 CFR 30.415)

Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].

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Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.315(b)(2)(v)]

Shifting winds and temporary atmospheric inversions endangered both human populations at significant distance as well as nearby populations.

Threat of fire or explosion [300.415(b)(2)(vi)]

The facility fire began on the July 27, 2012, and continued thru to the July 31, 2012^t. The fire reignited several times, most notably on the morning of the 28th. A byproduct of PET combustion is acetaldehyde which is likely to have led to the reignition events.

The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)]

Over 400 firefighters and multiple agencies responded to this fire. Unified Command depended on the resources and expertise supplied by the EPA. These resources included air monitoring, multimedia sampling, advisory consultation, identification of chemical risks, floodwater management, and heavy equipment with trained operators to combat the reigniting fire.

IV. Selected Removal Actions and Estimated Costs

A. Situation and Removal Activities to Date

1. Current Situation

All removal activities have ceased at this time. Further actions have been referred to the Georgia Environmental Protection Division. The final report and incoming laboratory data are being processed and should be complete within 30 days.

2. Removal activities to date

July 28, 2012

START coordinated activities with IMAAC and provided air monitoring reports throughout the course of firefighting activities.

ERRS provided heavy equipment and arrived on-site at approximately 0700 on July 28.

Firefighting activities throughout the night reduced, but did not eliminate the blaze. At approximately 0830 on July 28, the blaze reignited with increased intensity moving along a previously unburned section of the Site. The blaze quickly moved through this new area and began to threaten a warehouse housing a large quantity of PVC. Hundreds of firefighters mobilized on the morning of the 28th to combat the renewed blaze and managed to prevent the fire from consuming the warehouse. In addition, the heavy equipment provided by ERRS began operating in conjunction with firefighting activities to provide debris separation to fully extinguish the plastic fuel sources and prevent recombustion.

The copious amounts of water, needed to fight the fire, created a pressing need for an available source of water. The OSC provided permission for the City of Summerville to draw water from a nearby creek beyond their normal permitted levels. The drinking water intake for the City of Summerville is located upgradient of the fire and water need considerations were balanced with firefighting resource needs. Water was drawn from Raccoon Creek approximately 3,000 feet downstream from the Site; this facilitated continuous visual monitoring by firefighter personnel who reported no observable impacts (i.e. no dead fish, no discoloration, no debris, etc.)

July 29, 2012

During the evening of the 28th, the prevailing winds changed to a North to South wind. START captured the change on perimeter air monitoring. Evacuation and shelter in place advisories continued in effect until the morning of the 29th.

Due to firefighting activities being required around the clock, the OSC requested further support to continue 24-hour operations. At approximately 1400 additional START support arrived on-scene and at approximately 1800 OSC Huyser arrived and ERRS provided an additional rotational staff.

During the morning of July 29, START conducted a radiation survey using a Ludlum Model 3. The results of the survey indicated no detections above background.

At approximately noon on July 29, the OSC and START met with County EMA and Unified Command. After review of air monitoring data from the previous night, public health advisories were reduced to a 0.25-mile radius shelter in place advisory and a two-mile radius "restrict outdoor activities" advisory.

As of the afternoon of the 29th, over 400 firefighters and 50 agencies had assisted in

combating the blaze and protection of public health. Substantial progress has been made in the elimination of open flames. The response continued to conduct debris separation and firefighting activities to completely extinguish the fire and eliminate the opportunity for recombustion. The use of 1% surfactant was initiated during the morning of the 29th.

The yards of two residential properties were flooded as a consequence of necessary firefighting activities. The OSC was requested to assist Unified Command in managing and rerouting this water via Raccoon Creek. The OSC tasked ERRS to pump and reroute the water back to firefighting operations, as well as create on-site drainage modifications to prevent renewed flooding during firefighting operations. In addition, START collected water samples and planned to collect soil samples from the residential properties once the water is removed.

The evening of July 29th, ERRS began removing water from the two flooded residential properties.

July 30, 2012

On the morning of July 30th, the OSC met with County EMA and Unified Command. After review of air monitoring data from the previous night, public health advisories were reduced to a 0.25-mile radius advisory to avoid outdoor smoke. See the documents section for the fact sheet.

Fire suppression activities continued to work in conjunction with heavy equipment to eliminate recombustion and minimize smoke. Significant progress was made utilizing this technique and fire suppression and fuel source. As of the afternoon of the 30th, approximately 10,000,000 gallons of water had been utilized for firefighting activities.

On July 30, START collected two soil samples from the flooded properties below the high water mark. START also collected air samples for SVOCs from within a quarter mile of the site. Air monitoring activities were moved to within a 0.25-mile of the site.

In conjunction with Unified Command, the OSC met with state representatives from both the Solid Waste Management and Water Quality programs of the GAEPD. GAEPD agreed to assume transitional management of the Site for storm water management and solid waste management after the fire was fully extinguished. For further information please contact the GA EPD representatives noted in the contact section.

July 31, 2012

START collected air samples for asbestos analysis to ensure the health and safety of the public and responders.

Air monitoring activities throughout the night indicated good to moderate air quality. After review of air monitoring data from the previous night, the OSC met with County EMA and Unified Command and all public health advisories were lifted.

On the morning of the 31st, ERRS completed removing water from the two flooded residences.

As of the morning of the 31st firefighting activities were minimal. Debris segregation and demolition activities ceased. ERRS completed decontamination of the heavy equipment and staged it ready for demobilization.

START and the EPA ceased on-site activities and met offsite to complete documentation of response actions.

GAEPD continued to direct the owner in recovery operations. The owner had installed hard boom in the creek and began installation of reinforced erosion control silt fencing around the perimeter adjacent to the creek.

3. Enforcement

The OSC secured both access and issued a Notice of Federal Assumption to the owner/operator as he was unable to provide the necessary resources during the course of the response.

B. Planned Removal Actions

1. There are no planned on-site removal actions pending.
2. Contribution to remedial performance

All on-site removal activities have ceased. Any potential long term remedial actions will be coordinated with the appropriate State and Federal programs.

3. ARARs

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable. In determining whether compliance with ARARs is practicable, the OSC may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted.

C. Estimated Costs*

| | |
|--------------------------------------|------------------|
| Contractor costs (ERRS) | \$100,000 |
| Contractor costs (START) | \$150,000 |
| Other Extramural costs | 0 |
| Contingency costs | 0 |
| Total Removal Project Ceiling | \$250,000 |

*EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA.

V. Expected Change in the Situation Should Action Be Delayed or Not Taken

A delay in action or no action at this Site would have increased the actual or potential threats to the public health and/or environment for airborne emissions from the burning facility.

VI. Outstanding Policy Issues

None

VII. Approvals

This decision document represents the selected removal action for this Site, developed in accordance with CERCLA as amended, and not inconsistent with the National Contingency Plan. This decision is based on the administrative record for the Site.

Conditions at the site meet the NCP section 300.415(b) criteria for a removal action and through this document; I am approving the proposed removal actions. The total project ceiling is \$250,000 and this amount will be funded from the Regional removal allowance.

Leo Francendese OSC
Leo Francendese,
On Scene Coordinator

August 12 2012
Date



PARTICULATE MATTER FACT SHEET FOR SUMMERVILLE MILL FIRE 2012

| AQI Category (AQI Values) | PM _{2.5} or PM ₁₀ Levels (µg/m ³ , 1-to 2-hr avg.) | PM _{2.5} or PM ₁₀ Levels (µg/m ³ , 8- hr avg.) | PM _{2.5} or PM ₁₀ Levels (µg/m ³ , 24-hr avg.) | Visibility – Arid Conditions (miles) | Recommended Actions |
|---|--|--|---|--|--|
| Good (0 to 50) | 0 – 38 | 0 – 22 | 0 – 15 | ≥ 10 | Implement communication plan if smoke event forecast |
| Moderate (51 to 100) | 39 – 88 | 23 – 50 | 16 – 35 | 6 – 9 | -Issue press releases to advise public about health effects and symptoms and ways to reduce exposure -Distribute information about exposure avoidance |
| Unhealthy for Sensitive Groups (101 to 150) | 89 – 138 | 51 – 79 | 36 – 65 | 3 – 5 | -If smoke event projected to be prolonged, evaluate and notify possible sites for cleaner air shelters -If smoke event projected to be prolonged, prepare evacuation plans -Individuals who have asthma or another lung disease or heart disease should consider wearing a particulate respirator when outside. |
| Unhealthy (151 to 200) | 139 – 351 | 80 – 200 | 66 – 150 | 1.5 – 2.5 | -Consider “Smoke Day” for schools (i.e., no school that day), possibly based on school environment and travel considerations -Consider canceling public events, based on public health and travel considerations. -All individuals should consider wearing a particulate respirator when the AQI is 151 or higher when outside |
| Very Unhealthy (201 to 300) | 352 – 526 | 201 – 300 | 151 – 250 | 1 – 1.25 | -Consider closing some or all schools (However, newer schools with a central air cleaning filter may be more protective than older, leakier homes. See “Closures”, below) -Cancel outdoor events (e.g., concerts and competitive sports) |
| Hazardous (≥ 300) | > 526 | > 300 | > 250 | ≤ 3/4 | -Close Schools -Cancel outdoor events (e.g., concerts and competitive sports) -Consider closing workplaces not essential to public health -If PM level projected to continue to remain high for a prolonged time, consider evacuation of sensitive populations |
| Notes: 1. These 1- and 8-hr PM _{2.5} levels are estimated using the 24-hr breakpoints of the PM _{2.5} Air Quality Index included in the February 7, 2007 issue paper (http://www.epa.gov/airnow/aqi_issue_paper_020707.pdf) by dividing the 24-hr concentrations by the following ratios: 8-hr ratio is 0.7, 1-hr ratio is 0.4. Visibility is based on 1-hr values. If only PM ₁₀ measurements are available during smoky conditions, it can be assumed that the PM ₁₀ is composed primarily of fine particles (PM _{2.5}), and that therefore the AQI and associated cautionary statements and advisories for PM _{2.5} may be used. This assumption is reflected in the column headings. 2. This table was adapted from Table 3, page 31 of <i>Wildfire Smoke: A Guide for Public Health Officials</i> , July 2008. 3. Based on New Mexico Department of Health's “Recommended Actions During Smoke Events” | | | | | |