United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, August 2, 2005
From: James Mitchell / Ken Rhame / Anita Boseman

Subject: Watertown Tire Fire
W 7910 Provimi Road, Watertown, WI
Latitude: 43.2198390
Longitude: -88.7874400

POLREP No.:	2	**Site #:**	B5CG
Reporting Period:		**D.O. #:**	
Start Date:	7/20/2005	**Response Authority:**	CERCLA
Mob Date:	7/20/2005	**Response Type:**	Emergency
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

On July 19, 2005, a tire fire broke out at the Watertown Tire and Recycling facility which is on the northwest side of Watertown, Wisconsin in the town of Shields. The Watertown Tire and Recycling facility is surrounded by Provimi RD to the south, Rich RD to the west, a creek to the east and agriculture to the north. The facility is in a mixed agricultural and residential area.

The fire spread rapidly and no injuries were reported. The fire engulfed the main building and the large tire stockpile in the rear of the facility. Actions taken by operators on site were able to establish a fire break for the chipped tires in the front of the building. There were several explosions on site from fuel tanks located within the building. Roads were blocked off and the Dodge County Health Department asked residents in the vicinity of the fire to close doors and windows and stay indoors (shelter in place). No evacuation order was made. The plume of smoke extended at least 93 miles to the southeast, stretching across Milwaukee and over central Lake Michigan. More than 637 square miles were covered by the plume, including 290 miles of Lake Michigan. The fire was reported to be out on Monday, July 25, 2005.

On July 20, 2005, Wisconsin DNR requested U.S. EPA's assistance in providing air monitoring and air sampling at the fire. U.S. EPA On-Scene Coordinator Mitchell, the Superfund Technical Assistance and Response Team (START), and U.S. EPA's Emergency Response Team (ERT) mobilized to the site to provide air monitoring assistance.

Current Activities

On July 25, 2005, ERRS subcontractor, Tracy & Sons, Inc. used vacuum trucks to pump and transport contaminated water that was contained in the drainage ditch north of Wisconsin State Route 19 near intersection with Rich Road and south of Provimi Road, to the containment basin that was excavated down gradient of the tire fire site to contain fire fighting run off, on the north side of Provimi Road. Approximately 1,000,000 gallons of water was removed from the drainage ditch and transported and off loaded into the containment basin. OSC Rhame demobilizes the ERRS Springfield Belle mobile water treatment unit due to limited treatment capacity and orders water treatment system that can handle/treat a greater flow rate (greater than or equal to 200 gallons per minute [GPM]). ERRS Springfield Belle can only treat up to 70 GPM. START personnel onsite to document site activities.
On July 26, 2005 START personnel measure dissolved oxygen (D.O.) concentration of water in containment basin and in the drainage ditch adjacent to containment basin. D.O. concentrations ranged from a high of 1.05 milligrams per liter (mg/L) in the drainage ditch to a low concentration of 0.86 mg/L for the water in the containment basin. START personnel collect four water samples from the containment basin and drainage ditch adjacent to the containment basin for analysis for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), oil and grease, target analyte list (TAL) metals,

Chemical Oxygen Demand (COD), biological oxygen demand (BOD), pH, and total suspended solids (TSS). The samples were hand delivered to STAT Laboratory in Chicago, IL for quick turnaround time analysis. ERRS initiate aeration of the water in the containment basin using an air compressor and perforated PVC pipe.

On July 27, 2005, office trailer delivered to site and staged on crush and run pad/parking area constructed just south of the containment basin and along the north shoulder of Provimi Road. Multiple truck loads of crush and run delivered and offloaded along the north shoulder of Wisconsin State Route 19, near the intersection of Rich Road, for the purpose of creating a staging area for the water treatment system. ERRS construct a crush and run pad along the shoulder of SR19 that measures approximately 200 feet long by 12 feet wide. Water treatment system carbon filtration units begin arriving on site. START personnel measure dissolved oxygen (D.O.) concentration of water in drainage ditch near SR19. The D.O. concentration of the water at this location was 0.68 mg/L. ERRS extend and deepen the containment basin and build up freeboard to handle the additional water that is being pumped out of the drainage ditch and offloaded into the basin. Preliminary analytical results received for the samples collected on July 26, 2005 showed trace amounts of Benzene, Toluene, Ethyl-benzene, Xylene (BTEX), Polycyclic aromatic hydrocarbons (PAHs), RCRA metals, and semivolatile organic compounds.

On July 28, 2005, the analytical results for water samples collected by the WI Dept. of Natural Resources (DNR) are provided to the ERRS water treatment design engineer to ensure proper design of treatment system. Aeration of water in containment basin continues. START personnel continue to measure concentration of water in containment basin and in the drainage ditch. Additional components of water treatment system delivered to site. EPA receives news that there was four trucks of fire suppression water recovered on Saturday from the tire fire fighting effort by Tracy & Sons and delivered to the local waste water treatment plant that fouled their system.

On July 29, 2005, Rain-for-Rent frac tank delivered to water treatment staging area and ERRS crew begin assembly of water treatment system along SR19. Bags of granular activated charcoal and organic clay that had been delivered are emptied into appropriate treatment vessels and moved into place. START personnel make final arrangements with local laboratory (Test America, Inc.) to analyze samples of effluent that will be discharged from the water treatment system when it becomes operational.

On July 30, 2005, ERRS crew continues assembling water treatment system. ERRS water treatment design engineer onsite to oversee assembly of system. OSC's Rhame and Boseman attempt to obtain assistance from the state and local officials to have protective concrete barriers placed along shoulder of SR19 to protect workers and water treatment system from vehicular traffic. Due to liability reasons, neither the state nor local officials could provide assistance with setting up a protective concrete barrier. Jefferson County did provide roadway construction signs as well as flashing warning lights. WI DNR is in the process of getting Dept. of Transportation permits that are required to work along the shoulder of a roadway. ERRS subcontracted local electricians to energize the field office trailer that is located near the fire site along Provimi Road. START receives EPA approval on sampling and analysis plan (SAP). A copy of the final SAP was faxed to the WI DNR for their records. ERRS water treatment design engineer provides copy of the water treatment system block flow diagram and treatment system layout to START for site file. ERRS purchase cement barriers from local supplier and erect a protective barrier in front of the water treatment system. Provimi Road reopened to through traffic (road had been closed since 7/20/05 due to the fire). START personnel photo-document assembly of water treatment system. Local fire depart provides water to prime water treatment system and charge the activated charcoal filter.

On July 31, 2005, ERRS crew tests operation of water treatment system in the morning. System taken off-line when ion exchange resin was detected in pH adjustment mixing tank and frac tank. ERRS resolves ion exchange resin problem and bring system back on line. ERRS discharge effluent back into drainage ditch. Initially, several thousand gallons were treated and discharged back into the drainage ditch upstream of the dike. This was done to ensure that all of the water that was in the system at the initial start up would go through all stages of treatment. START personnel continue to monitor D.O. concentrations of the effluent and water in the drainage ditch. Effluent D.O. readings ranged from 10.8 mg/L in the drainage ditch to 2.3 mg/L in the effluent. ERRS water treatment engineer increased the volume of hydrogen peroxide to the treatment flow to increase the D.O. concentration in the effluent stream. At approximately 1525 hours, the effluent discharge was rerouted to discharge on downstream of the dike in the drainage ditch. Flow rate of system operating at about 170 GPM. START personnel collect two samples of treated effluent from the frac tank for analysis for VOCs, SVOCs, TAL Metals, oil and grease, pH, COD, BOD, and TSS. START hand delivers samples to Test America, Inc. for quick turnaround results. Water treatment system taken off-line at end of shift after treating approximately 50,000 gallons of water.

On August 1, 2005, water treatment system is put back on line and ERRS crew plans on operating the system 24 hours per day. Preliminary results for the effluent samples submitted to the laboratory on 7/31/05 were received and reviewed. Effluent is showing trace concentrations of the volatile organic compound 1,2-dichloroethane (1,2-DCA). Source of 1,2,-DCA is not known at this point. START personnel continue to take samples of treated effluent for chemical analysis at local laboratory and continue to monitor effluent and water in drainage ditch and surface impoundment for D.O. ERRS

subcontractor, Vogt Excavation, Inc., removes dams constructed in drainage ditches upstream from the treatment system to allow water to flow down stream to be treated.
On August 2, 2005, water treatment system temporarily shut down to allow the high concentration of sediment (created when upsteam dams were removed) to settle out. High sediment load was clogging bag filters in treatment system. Additionally, the OSC intends to keep the system off-line until the source of the 1,2-DCA can be determined. Local laboratory provided with a sample of the F-500 fire fighting agent used in fire fighting effort. Foam sample to be analyzed to determine if foam could be a potential source of 1,2-DCA.

Planned Removal Actions

Continue with water treatment operations. Current plan is to treat all water in drainage ditch north of SR19 and then disassemble the treatment system and reassemble the system near the containment basin to treat the contaminated water in the containment basin, currently estimated at approximately 2 million gallons.

Next Steps

Investigate the source of 1,2-DCA. Continue treating water in drainage ditch from Provimi to HWY 19 and discharging treated effluent downstream (south of SR19) Continue to collect effluent samples to determine effectiveness of treatment system and continue to monitor effluent D.O. concentrations.

Key Issues

Source of 1,2-DCA
U.S. EPA received a request from resident to sample creek sediment.

response.epa.gov/WatertownTireFire