

April 2008

Kirby Tire Recycling, Inc., Wyandot County

In 1999, the Kirby Tire Recycling facility in northeast Wyandot County contained about 25 million tires. Based on the original 50-cent fee collected on sales of new tires, Ohio EPA estimated it would take up to 15 years to clean the property, which is located at 3137 Route 231 near Sycamore. However, nine years later, the site is clear of tires. The site has been cleaned up faster because the state increased the fee on new tires to \$1 per tire, and received favorable cleanup prices from competitively awarded contracts.

From July 1999 through June 2006, Ohio EPA contractors removed 18,820,186 scrap tires (188,201.86 tons), plus an additional 38,727 tons of solid waste that was mixed with the tires, from the 120-acre site.

In June 2006, a contractor began removing the burnt tires. This final phase of the clean-up project was completed in April 2008.

Burnt tires and tire fire residuals were excavated from seven large mounds. The burning tire piles were buried in 1999 under about two feet of soil and clay soil to smother the fire. The tires were shredded and sent to a solid waste landfill in the area along with the contaminated soil below them. With an estimated five to seven million burnt tires, plus the contaminated soil, more than 270,000 tons of waste was removed from the site.

As the buried tires were excavated, a wastewater treatment system installed within the burnt tire piles also was removed. The system was installed in April 2000 to collect and treat storm water that soaked into the pile and became contaminated as the water contacted the oils and other residue left after the fire. The wastewater treatment system also was used to treat any water that contacted the fire residuals as they were unearthed



The August 1999 arson fire at Kirby Tire Recycling near Sycamore burned more than five million tires.

and removed. More than 20 million gallons of water was treated by this system by the time it was deactivated in February 2008.

Background/History

The Kirby Tire Recycling business was started in the 1950s by the late Noble Kirby. The site sits in a rural area in northeastern Wyandot County. The health department and other local officials had worked for years to get the owners to control the growing fire threat and spray the site for mosquito control, but this effort was hampered by the lack of detailed laws and regulations on scrap tire storage.

Ohio's scrap tire program began in 1993 with the passage of state legislation. Since that time, Ohio EPA and the Wyandot County Health Department worked to bring the owners and operators of the site into compliance with state regulations. As a result of a complaint filed by the Ohio Attorney General on behalf of Ohio EPA, in July 1997, the Wyandot County Court of Common Pleas ordered Kirby Tire Recycling Inc. to

remove 5,000 scrap tires per day from the site. The court order also required the business to remove all incoming tires within 72 hours of receipt and to comply with other Ohio scrap tire regulations, including limits on the size of tire piles, establishing fire lanes between piles and performing mosquito control.

A year later, the business had made no progress toward complying with the court order, so the state of Ohio filed a contempt of court motion against the business. In September 1998, the Wyandot County Court of Common Pleas ordered the business to stop accepting scrap tires.

On Sept. 22, 1998, Ohio EPA issued scrap tire abatement orders to Kirby Tire because the accumulation of scrap tires constituted a danger to public health, safety and the environment. When the owner failed to comply, Ohio EPA initiated the state-funded cleanup of the site. State contractors began removing tires from the facility in July 1999.



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Tire Fire

In the early morning hours of Saturday, Aug. 21, 1999, state-contracted security guards at the site discovered a fire on the southwest section of the site. Twenty local fire departments with about 250 firefighters responded to the scene, along with numerous local, state and federal agencies and local heavy equipment operators. Thick, black smoke from the blaze could be seen 60 miles south in Columbus.

Led by U.S. EPA's emergency response unit, teams spent five days covering the burning tires with soil from on-site and a nearby quarry. The soil succeeded in smothering the flames. Water had been ineffective in extinguishing the intensely hot fire, but was used successfully to keep other tire piles from igniting.

Ohio EPA, U.S. EPA and others were on-site for 24 days during and after the fire. Oily runoff from the fire during the first four days of the fire killed nearly 20,000 fish for more than five miles downstream in Sycamore Creek. Sycamore Creek is a tributary to the Sandusky River, a state scenic river. Retention ponds were constructed to collect the oily runoff for treatment, vacuum trucks removed oil from the creek and aerators were added to the creek to increase oxygen levels and prevent a further fish kill. Approximately 56,000 gallons of oil from the burnt tires were collected and disposed. Another layer of clay soil was added by Sept. 14, 1999, to reduce the amount of storm water seeping into the mounds of buried tire fire residuals.

The Aftermath

Today, Sycamore Creek has recovered to its pre-fire condition. Contaminated water from the mounds of burnt tires was successfully treated by the wastewater collection system to protect the creek and ground water.

In 2002 and 2003, four young men were convicted of setting the fire. All received multi-million dollar fines to go

toward restitution for costs incurred fighting the fire. Combined, the men owe more than \$12 million; however, only a few hundred dollars has been paid.

Since the initial contempt finding in 1998, Ohio has returned to court several times pursuing action against the Kirby corporation and property owners, who are members of the Kirby family. In 2001, the court ordered the corporation and affiliated family members to comply with previous court orders to assist with the cleanup, report all assets of more than \$200 to the state and not to sell or transfer any assets unless the money is put into a trust fund for the cleanup.

In June 2005, three family members were fined \$250 and sentenced to 30 days in jail on contempt charges for failing to comply with the 2001 court orders. In October 2005, the Wyandot County judge issued penalties to the family members and corporation after approving the state's September 2004 motion for summary judgment to hold the owners liable for environmental problems at the site. The \$20 million civil penalty set a record in Ohio for environmental cases. The family and corporation also were ordered to pay up to \$26.3 million in clean-up costs. The court-ordered civil penalty and fine have been placed as a lien against the property.

Ohio EPA spent more than \$13.9 million to remove the surface tires, plus more than \$7.3 million to treat surface water contaminated from contact with the burnt tires. Local, state and federal agencies and fire departments spent more than \$2.3 million during the fire and its immediate aftermath. Removal and disposal of more than 270,000 tons of fire residuals and contaminated soils has cost over \$11 million. The total cost for Ohio was more than \$32 million dollars on the Kirby cleanup. U.S. EPA spent an additional \$2.3 million in emergency response and firefighting costs.

Eighteen monitoring wells were installed after the fire to check ground water under the site for contamination.



A 2006 aerial photo shows the property after approximately 23 million tires were removed, before a contractor began digging out burned tires that were buried to put out the 1999 fire.

Fortunately, regular monitoring of these wells has shown no impact to ground water quality beneath the site. The wells will be monitored for at least two more years to ensure the ground water is free of contamination from the site. Upon completion of state activities, control of the site will be returned to the property owners.

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