



YOU SHOULD KNOW

about the Hazardous Waste at Giant Cement's Harleyville Facility

Did you know Giant burns over 121,000 TONS of HAZARDOUS waste in Harleyville and is the 10th largest receiver of hazardous waste in the country?

Did you know Since 2000, when Giant was bought by the Spanish company Cementos Portland Valderrivas, the facility has amassed violations for mismanaging hazardous and flammable waste?

Did you know Giant violated the Clean Air Act nine times in the last three years, resulting in negotiated fines totaling \$43,500?

Did you know Both the US Environmental Protection Agency and the SC Department of Health and Environmental Control have warned Giant about the frequency and severity of fires at the facility?

Did you know Giant's Harleyville facility may be affecting the health and safety of you and your loved ones?

This pamphlet puts you in the know. It includes information from files kept at the South Carolina Department of Health and Environmental Control (DHEC) obtained through the Freedom of Information Act, as well as information from the US Environmental Protection Agency (EPA) and the Local Emergency Planning Committee.

Giant is displaying careless and irresponsible behavior toward our environment and fire safety. After you read this, you may feel the same way.

When you do, empower yourself and your community by taking action!

Go to the back of the pamphlet and contact the EPA.

Giant Mishandling of Hazardous Waste

You may only know Giant as a cement maker. Actually, Giant also receives thousands of tons of hazardous and non-hazardous waste from other companies and at times waste from clean up activities at Superfund sites – sites the EPA has deemed the most polluted. Giant burns the waste in its cement kilns.

Giant in Harleyville is the 10th largest receiver of hazardous waste in the country!¹

It burns 121,000 TONS of hazardous waste a year!

Hazardous chemicals at the facility include highly flammable chemicals like acrylonitrile and allyl alcohol that also pose a risk of cancer.² (See more chemicals at the facility in Chart 1.)

With such a large volume of hazardous waste, Giant has a great responsibility to ensure the safety of its workers and people around the plant. This includes properly maintaining a facility to prevent pollution and fires.

However, Giant has failed to effectively manage waste and chemicals on the site. In the last four years, the facility has been in violation of its

waste recovery permit more than it has been in compliance.³

Inspections at the facility have revealed dirty and poorly maintained conditions. For example, during a DHEC inspection in 2002:⁴

- “There was a fairly strong solvent odor noticed” when the inspection team passed the kiln area.
- Solvent was found on the outside of a rail car.
- Inspectors noted there was a small crack above a Brady inflow pipe.
- Shredded material was found on the ground.
- There was a “small hole in the bottom of the first feed screw at the bottom of the TODD tank.”
- There was a slight gap through which the combustion zone could be seen.
- Giant was fined \$5,000 for bringing in more waste-carrying railcars than permitted, which possibly increased the amount of waste held at the site.

After this inspection, Giant remained in violation of its waste recovery permit for a year and a half.⁵

Spills and leaks of hazardous waste at the facility persist. Some have threatened your groundwater.

- Giant was warned on June 5, 2000 that a plastic tote of Chromium Nitrate was leaking onto the ground and creating a pool three-feet in diameter. Ten days later the chemical was in the same spot; DHEC penalized Giant \$4,500.⁶
- Hazardous waste spilled onto the ground from a railcar on January 24, 2003.⁷ One drum of contaminated soil was removed on the day of the spill. Inspection by DHEC three days later revealed more soil was contaminated requiring additional removal of soil and rocks.
- In 2004, inspectors “noticed that housekeeping problems from previous recent inspections had not been corrected.”⁸ They included “solid hazardous waste leaking from the screws” at two kiln doors; “waste dripping from the sampling port;” and waste leaking from manway covers and flame arrester.
- Residual liquid hazardous waste continuously leaked onto the floor from a disconnected feed line. Instead of fixing the feed line, Giant attached a plastic bag to the end of the leaking line. The plastic bag then began to leak. Giant was first notified on April 21, 2005 to fix the leak. Two months later, Giant had been warned 8 times but the company still had not fixed the leak.⁹
- On June 8, 2005, approximately 10 gallons of hazardous waste derived fuel was released into a secondary containment unit and onto the ground during a pipe cleaning. Giant was concerned about groundwater and excavated layers of soil. A few days later, one chemical--benzo(b)fluoranthene—was still present and above EPA soil screening levels.¹⁰
- During the same month, grinding aid had leaked out of a pipe and onto the ground.¹¹ The grinding aid had not been cleaned up by the company for over two weeks and after 3 warnings.

Chemicals Present at the Giant Facility and their Risks

Chemical*	Some of its Risks ¹²
Acrylonitrile (EHS)	<ul style="list-style-type: none"> • probable carcinogen in humans • can irritate the lungs causing coughing and/or shortness of breath • flammable and reactive chemical and a fire and explosion hazard
Allyl Alcohol (EHS)	<ul style="list-style-type: none"> • may cause mutations (genetic changes) • may have a cancer or reproductive risk • flammable liquid and a fire hazard
Ammonia Solution (greater than 20%)	<ul style="list-style-type: none"> • Risks not available
Carbon Disulfide (EHS)	<ul style="list-style-type: none"> • can cause reproductive damage • can cause sperm abnormalities and spontaneous abortions • may damage the liver and kidneys • flammable liquid and a fire hazard
Methyl Chloride	<ul style="list-style-type: none"> • highly flammable gas and a dangerous fire hazard • long-term exposure to can cause frostbite and severe skin and eye burns
Methyl Mercaptan (EHS)	<ul style="list-style-type: none"> • may damage the liver and kidneys • repeated exposure may affect the blood cells causing anemia • highly flammable gas and a dangerous fire hazard
Titanium Tetrachloride (EHS)	<ul style="list-style-type: none"> • a reactive chemical and an explosion can occur • can irritate the lungs causing coughing and/or shortness of breath
Vinyl Acetate Monomer (EHS)	<ul style="list-style-type: none"> • flammable and reactive chemical and a fire and explosion hazard • may affect the heart, nervous system and liver • may decrease fertility in males
Isopropyl Alcohol	<ul style="list-style-type: none"> • may affect the liver and kidneys • flammable liquid and a fire hazard
Methyl Chloroform	<ul style="list-style-type: none"> • may cause mutations (genetic changes) • may damage the liver and kidneys
Phthalic Anhydride	<ul style="list-style-type: none"> • may cause a skin allergy • may cause an asthma-like allergy
Pseudocumene	<ul style="list-style-type: none"> • can cause anemia • high exposure can cause fatigue, dizziness, lack of coordination, anxiety and confusion

EHS: Extremely Hazardous Substance

Giant Failed to Report Presence of Hazardous and Extremely Hazardous Substances

When you look up information kept by the EPA about the release of chemicals into the environment from the Harleyville facility, you might think it does not look that bad. But, actually, it's probably much worse than Giant will have you know.

It appears that Giant is withholding vital information from the public that you have a right to know.

According to research by the United Steelworkers, the company did not submit the required forms to the EPA and DHEC about routine toxic releases to the air, land and water for at least ten chemicals. (See Chart 1 for chemicals possibly not reported.)

Companies that "otherwise use" 10,000 pounds or more of listed Toxic Release Inventory (TRI) chemicals must report annual releases for each chemical. Giant has an obligation to report this information under the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA).

In addition, emergency teams that take on the task of fighting fires at the Giant facility,¹³ have not been receiv-

ing vital information regarding the identity, location, and volumes of hazardous wastes, which contain extremely hazardous chemicals at the Giant facility.

Giant argues that it is not required to report the information.¹⁴ This appears to be because of a loophole in the law, according to analysis by the United Steelworkers.

Giant has taken the position that because these hazardous wastes that are used as fuel at Giant Cement are not deemed products under federal regulations, Giant and its subsidiary, Giant Resource Recovery (GRR), does not have to provide the Local Emergency Planning Committee, or Fire Department, the identity, location and volumes of certain hazardous substances stored at the facility in 2004.

At least six of these chemicals are considered "extremely hazardous," posing a significant health threat to first responders and the community in the event of a catastrophic release at the facility.

Fire Alarms at Giant

In 1999, the EPA “determined that conditions exist at Giant Cement Company...which render this facility unacceptable for the receipt of off-site waste.”¹⁵

Within three years, from 1996 to 1999, at least six-fires and four explosions occurred in various areas of the facility. EPA was alarmed by the number of fires at the facility.

“On June 29, 1998, a fire occurred inside the solid waste fuel containment building while processing solid waste fuel. The fire was followed by an explosion which caused structural damage severe enough to warrant modification of the screw conveyor system. There were several workers injured during this incident,” the EPA wrote.¹⁶

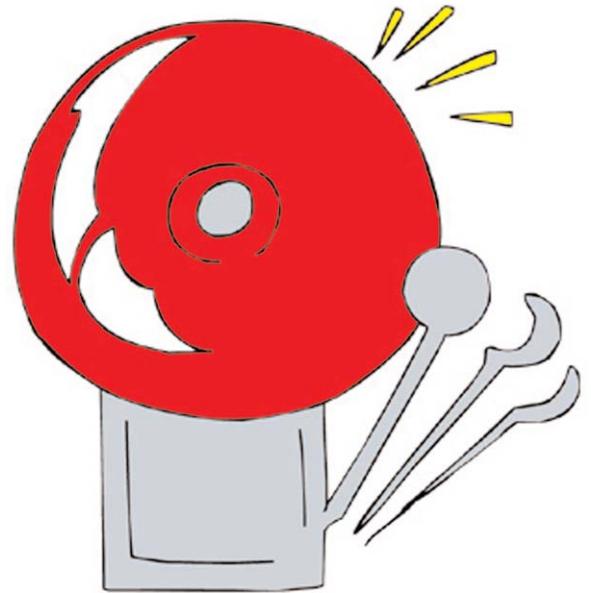
EPA noted the failure of the company to regularly inspect the Brady system where hazardous waste is burned and hazardous waste fuels are stored. Giant was cited for not operating a containment building and shredder unit to minimize the possibility of fire or explosion.

In response to the letter, Giant defended itself and told EPA that its safety and environmental controls are “state of the art” and exceed the industry standards.¹⁷

However, since Giant made this statement, fires—often resulting from ignition of hazardous waste—have persisted at the facility.

Five years later, on April 23, 2004, the State agency informed Giant of DHEC’s “growing concern regarding the frequency and severity of fires in the Solid Waste Processing Facility.”¹⁸ DHEC wrote:

“Giant Cement Company (Giant) designed and installed improvements to the automated fire detection and suppression equipment in early 2000 as a result of numerous fires. Since that time, there have been eight fires (see attached Table 1). One of these



“EPA has been increasingly alarmed at the number of unplanned fire events at Giant Cement.” -EPA

fires significantly impacted a large portion of the Solid Waste Processing Facility.”

According to DHEC, the measures Giant implemented did not change the frequency and severity of the fires and Giant should “consider developing a more proactive approach that would prevent the occurrences of fires in the first place.”¹⁹ DHEC made suggestions, such as doing a better analysis of waste the company receives, and stated, “Although not required, the Department would

appreciate being notified within the hour of any future events involving a fire at the facility.” DHEC warned that further fires incidents may elicit enforcement.

About three months later, on July 30, 2004, waste including Toluene (a chemical that can cause birth defects), caught on fire.²⁰ On April 14, 2005, another fire occurred.²¹

The public should ask DHEC if Giant was fined for these fires and ask Giant if it will ever end!

Table of Fire Incidents at Giant Cement, created by DHEC in a letter to Giant, April 2004

TABLE 1

Summary of Fire Incidents at Giant Cement Since September 2000

Date	Incident Description	Cause	Dept Response
9/19/00	Fuel operator observed "hot spot" and manually initiated dry chemical fire suppression system.	Unknown	CFIP Warning Notice 00884 Issued
12/16/00	Front loader operator observed flame on shaker screen. Dry chemical suppression system automatically activated.	Unknown	Letter (Buchanan to Salkowski)
5/23/02	Fire in shredder system causes dry chemical suppression system to automatically activate.	Oxidizing Agent in waste PPE	None
8/1/02	Fire in shredder system causes dry chemical suppression system to automatically activate.	Oxidizing Agent in waste PPE	None
9/18/02	Fire occurred when mixing waste piles in solids building. Dry chemical along with foam and water suppression system activated. Building is damaged.	Unknown	None
6/25/03	Fire on shaker screen activates dry chemical suppression system.	Non-empty Aerosol Cans	CFIP Warning Notice 00959 Issued
10/25/03	Pile of waste in solids building spontaneously ignites activating dry chemical along with foam and water fire suppression system.	Unknown	CFIP Warning Notice 00965 Issued
2/21/04	Fire occurred on shaker screen activating dry chemical fire suppression system.	Metal that sparks in contact with water	CFIP Warning Notice 00894 Issued

Neighbors under a Cloud of Dust: What are you breathing?

One thing that makes it obvious that Giant makes cement is, unfortunately, the cloud of dust around the plant and neighborhood. Neighbors have complained to DHEC of dust settling on their property or they have noticed other emissions in the air.

The “dust” in the air is particulate matter, which is a mixture of solid particles and liquid droplets.²² Because these particles can carry other health-damaging chemicals into the body, they can pose serious health risks when inhaled. Particulate matter can also cause premature death, emphysema, asthma, and chronic bronchitis.

When DHEC investigators follow up with the complaints, they often find Giant is in violation of air laws. It happens quite a lot.

Giant received four formal and five informal enforcement actions in the last three years for violating the Clean Air Act, resulting in negotiated fines totaling \$43,500.²³

2000 – Emissions of particulate matter from a kiln exceeded permit limits by emitting over 45 pounds an hour – about 14 pounds over the limit. Giant paid a \$4,000 penalty.²⁴

2001 – Emissions of particles from a kiln exceeded permit limits by emitting over 33 pounds an hour – about 4 pounds over the limit. Giant paid a \$9,000 penalty.²⁵

2002 – During an inspection, holes were noted in the weigh belt housing and Giant was cited for “failing to control air pollutant emission from each hazardous waste management” unit in accordance with SC standards.²⁶

Fugitive emissions from the quarry were found to



be 4 times the permit limit. Giant was issued a notice of violation for not storing kiln dust in a way to prevent emissions.²⁷

2003 – Giant received a notice of violation for fugitive emissions from various points in the plant two to three times higher than permitted and observed during several inspections.²⁸

Giant was penalized \$10,000 for its violations in 2003.²⁹

2004 – For the 3 months, Giant reported emissions that exceeded the permitted limit.³⁰

Giant paid two \$10,000 fines this year.³¹

2005 – Giant paid a penalty of \$13,500 for excessive visible emissions.³² At one point emissions were more than six times the allowable limits. Giant said some emissions were the result of a missing lid to cover an elevator. The company also failed to submit test reports.

Giant Profits from Pollution: Case of StableSorb®

Dust that does not escape into the air from Giant's cement kilns is collected by pollution control equipment known as "baghouses." This dust is referred to as cement kiln dust (CKD) and is classified as industrial waste.

Due to concerns that contaminants in CKD will leach into groundwater, the State of South Carolina prohibits its disposal in construction and demolition landfills.³³ So why is Giant collecting it and selling it as a product?

Under the name StableSorb®, Giant sells CKD to construction companies and others who apply it to soils and use it for projects like roads.³⁴

What are some of the concerns about StableSorb®? Well, there's a good chance it contains toxic metals, such as lead and arsenic, as well as dioxins.

Dioxins are a group of chlorinated compounds with the most toxic being 2,3,7,8-tetrachlorodibenzo-p-dioxin or TCDD, which has been linked to cancer and birth defects.³⁵ There are 17 dioxin compounds of concern.

According to EPA 2000 data, in general, dust created from cement kilns that burn hazardous waste produce about 3.3 grams of dioxins a year on average.³⁶ Also, EPA has shown that the most hazardous dioxin, TCDD, is produced by cement kilns.

Yeah, EPA measures dioxins by grams because that's how potent they are suspected to be. Yet, Giant boasts that its CDK improves "environmental quality" when applied to soil contamination by changing the chemical makeup of the soil. Is Giant really just making a profit by spreading its pollution around?



DHEC Picture: Residual liquid hazardous waste continuously leaked onto the floor from a disconnected feed line.

Instead of fixing the feed line, Giant attached a plastic bag to the end of the leaking line. The plastic bag then began to leak. Giant was first notified on April 21, 2005 to fix the leak. Two months later, Giant had been warned 8 times but the company still had not fixed the leak.⁹

Plastic bag wrapped around Kiln #5 entrance with waste collected at the bottom.

Giant Pattern of Pollution and Fires

Problems at Harleyville are part of a larger pattern of environmental and safety violations by the company. Other facilities owned by Giant or its parent company, Cementos Portland Valderrivas (Cementos), have also caused problems for residents. Some examples include...

Keystone

Giant also owns a facility under the name Keystone in Pennsylvania. It burns about half the amount of hazardous waste burned in Harleyville.³⁷ In 1997, a fire occurred. 1600 people, including 950 school children, were evacuated when there was fear of an explosion because of what was originally reported as an over-heated tank.³⁸

Investigators later determined that a flammable liquid, peroxide, got into the mix used as fuel. The peroxide was not initially detected because the company did not require their suppliers test for it.³⁹ Keystone paid a \$488,000 fine.⁴⁰

Carolina Solite

Giant recently sold its Carolina Solite facility in Norwood, North Carolina. But before the sale was complete, the company was fined nearly \$270,000—the largest fine in the state since 1996—for air violations.⁴¹ The company failed to monitor its emissions and then it submitted false data to the state.

“Residents near the plant claimed for years that fumes from hazardous waste lowered their property values and probably made them sick,” several news reports said.



Cementos' Dragon Products

Residents living near Cementos' Dragon Products facility in Portland, Maine have been concerned with the way the facility has been run. They have filed lawsuits against the company claiming the dust from the facility harmed people's health.

They sought regulation of the facility and its 840,000-ton pile of cement kiln dust.⁴² Regulation is possible now that the Board of Environmental Protection assumed responsibility of Dragon Products' licenses.⁴³ The residents withdrew their lawsuit.

Citations

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3 EPA Enforcement and Compliance History Online. Retrieved online March 29, 2006 at www.EPA.gov/ECHO.

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6 DHEC Consent Order, 00-33-HW, December 12, 2000.

7 DHEC. January 28, 2003. Environmental Quality Control Incident Report.

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11 Warning Notice 00896, July 28, 2005.

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27 DHEC. July 23, 2002. Notice of Violation.

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You Can Take Action!

When fires, air pollution and chemical spills are expected occurrence at a company, and when a company continues to violate environmental laws enacted to protect the community, there is something grossly wrong. It is often the public that is wronged.

When hazardous waste is spilled on the ground, it is your ground water that is threatened. When a cloud of dust blooms in the sky, it is your health that is threatened by particulate matter and many other harmful substances.

You, workers and emergency responders all face the possibility of a catastrophic disaster. This threat is particularly troubling in light of Giant's frequent fires and their failure to file reports that would alert emergency responders about the quantity and location of large quantities of dangerous chemicals that might ignite or explode.

You deserve accountability.
Exercise your RIGHT TO KNOW and voice your concerns.
Contact: Mary Kate Lynch, US EPA Region 4 at (404) 562-8327

