

U.S. Department of Labor

Occupational Safety and Health Administration
1851 Executive Center Drive, Suite 227
Jacksonville, FL 32207
Phone: 904-232-2895
FAX: 904-232-1294
Reply to the Attention of the **Area Director**



July 22, 2010 VIA EMAIL agant@pcnh.com

Andrew Gant
Panama City News Herald
501 West 11th Street
Panama City, FL 32402

RE: Freedom of Information Act (FOIA) request No. 10-167 for some of the OSHA records regarding the investigation of the death of **Michael Robert Fries** while employed by **Green Circle Bio Energy, Inc.** (Inspection No. 313874877).

Dear Mr. Gant:

This is in response to your FOIA request dated today, and referenced above. I called you to discuss your request. You stated that your request would be satisfied if I provided to you a copy of the Investigation Summary, the Accident Investigation Narrative, and the recommendation letter which the Occupational Safety and Health Administration (OSHA) sent to the employer.

This information from the case file, which I determined to be disclosable under the FOIA Act (USC 552) and departmental regulations implementing these provisions (29 CFR 70), is attached. There was some information which was not disclosed. The reasons for not disclosing the information are as follows:

The following page had information deleted in accordance with 5 USC 552(b)(7)(C) or (D) which respectively protects the privacy of individuals and the identities of confidential sources: Page 1 of the Accident Investigation Narrative

If you believe that we should not have denied you the information listed above, you may file an appeal of this decision with the Solicitor of Labor within 90 days from the date of this letter. The appeal must state, in writing, the grounds for the appeal, including any supporting statement or arguments. To facilitate processing, you may wish to fax your appeal to: (202) 693-5538. The appeal should include a copy of your initial request and a copy of this letter. The appeal must be addressed to: Solicitor of Labor, U.S. Department of Labor, Room N-2428, 200 Constitution Avenue NW, Washington, D.C. 20210. If mailed, both the envelope, and the letter of appeal itself should be clearly marked: "Freedom of Information Act Appeal."

For your information and possible future use, you can check an employer's OSHA inspection history by visiting our Internet Web Page. The address is: <http://www.osha.gov/>

If I may be of further assistance with this matter, please contact me and reference FOIA No. 10-167. Your interest in occupational safety and health is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "James D. Borders". The signature is stylized with large loops and a long horizontal stroke at the end.

James D. Borders
Area Director

Attachments



Investigation Summary

Tue Jun 8, 2010 7:00am

Reporting ID	Investigation Summary Number	OSHA-36 Number	OSHA-36 Establishment Name
0419700	201354016	101357895	Green Circle Bio Energy, Inc.
Event Date	02/06/10	Event Time	10:00 am
Type of Event	Inhalation of steam		

Inspection Number/ Establishment Name	313874877 Green Circle Bio Energy, Inc.
Injured/Deceased Name	Michael Robert Fries
Sex:	M. Male
Age:	42
Injury:	A. Fatality
Nature:	05 Burn or scald (heat)
Part of Body:	28 Lung
Source of Injury:	23 Heat (environmental or mechanical)
Event Type:	08 Inhalation
Environmental Factor:	08 Materials handling equipment or method
Human Factor:	10 Operational position not appropriate for task
Task:	A Regularly Assigned
Substance Code:	
Occupational Code:	

Abstract:

The employer produced pelletized wood by stripping bark from raw timber, burning the bark for fuel, and drying the remaining white wood to increase the heat content in the wood. Two furnace units were used. In each furnace unit, the hot gases and ash (inorganic material that was not combusted) from the primary combustion chamber were pulled into a secondary combustion/retention chamber by fans. An ash hopper was attached to the bottom of the secondary combustion unit, and this ash hopper funneled the ash from the secondary combustion process to a water conveyor system. There was a 24-inch diameter pipe that connected the bottom of the ash hopper to the water conveyor system that conveyed the ash to a disposal bin. Ash would drop through the ash hopper into the water conveyor system, but ash would also stick to the side of the hopper and secondary combustion chamber, and plug the 24-inch pipe. Every two or three months, ash would have to be cleaned from the sides of the chambers and pipe. One way to clean was to open an 18-inch by 18-inch door on the side of the hopper, stand on the metal enclosure of the water conveyor, and use metal pipes inserted through the door opening to knock the stuck ash loose. On January 13, 2010, the victim was working alone while cleaning the ash hopper. He was standing on the metal enclosure of the water conveyor, and was using a metal pipe to break loose the ash inside the hopper. Apparently, a hot klinker (term for a clump of ash that is stuck to the hopper wall) fell into the water conveyor system, and produced steam that severely burned the victim's lungs. The victim was taken to a hospital where on February 6, 2010, he died from his injury.

**Green Circle Bio Energy, Inc.
Accident Investigation Narrative
OSHA Inspection No. 313874877**

Victim

Name: Michael Robert Fries
Age: 42
Title: Production/Panel Operator
Employer: Green Circle Bio Energy, Inc.

Crew/Witnesses

Witness 1: EXEMPTION
Title: Control Room/Runner
Green Circle Bio Energy, Inc.

Witness 2: EXEMPTION
Title: Production
Green Circle Bio Energy, Inc.

Witness 3: Jared Strickland
Title: Production Superintendent
Green Circle Bio Energy, Inc.

Witness 4: Greg Martin
Title: Vice President/Plant Manager
Green Circle Bio Energy, Inc.

Notification:

On January 20, 2010, we received a complaint about an employee who was "exposed to severe steam burn hazards during the klinker material clearing process." An employee had received steam burns from an incident that occurred the previous week. We initially handled this complaint via our phone-&-fax method. On February 6, 2010, at 2:34 p.m., the Area Director received a telephone call at home from the 800 service. The 800 service had been called by Greg Martin, Plant Manager, Green Circle Bio Energy, Inc., who reported that the victim had died about 10:00 a.m. on February 6, 2010 due to injuries he received from a workplace accident on January 13, 2010. An on-site investigation was initiated.

Equipment:

Teaford Furnace No.1
Teaford Furnace No. 2

Furnace operation, ash disposal, and cleanout:

Green Circle Bio Energy, Inc. produces pelletized wood by stripping bark from raw timber, burning the bark for fuel, and drying the remaining white wood to increase the heat content in the wood.

There were two identical furnace units and both typically operated 24 hours per day, 7 days a week. Bark was burned in the primary combustion chamber at a temperature of approximately 1,600 – 1,700 degrees. The hot gases and ash (inorganic material that was not combusted) from the primary combustion chamber were pulled into the secondary combustion/retention chamber by negative pressure generated by a large fan downstream from the dryer.

There was an ash hopper attached to the bottom of the secondary combustion unit that funneled the ash from the secondary combustion process to a water conveyor system. There was a pipe 24 inches in diameter connecting the bottom of the ash hopper directly into the water conveyor system that conveyed the ash to a disposal bin. The water level in the water conveyor system was checked at least one time every shift to ensure the pipe was submerged and the water seal was intact for proper operation of the secondary combustion unit under negative pressure. Adjacent to the water conveyor system was a water storage tank that added water to the water conveyor system as needed.

During normal operation of the furnace unit, hot ash from the secondary combustion chamber dropped through the hopper into the water conveyor system. Ash also collected on the sides of the secondary combustion chamber and the hopper. Over 2 to 3 months of operation, the 24-inch pipe that connected the hopper and the water conveyor became plugged with ash.

The ash was cleared from the pipe entrance by two methods. The first method was by shutting down the furnace, waiting for at least 48 to 72 hours, and having employees enter an access door by the dryer to blow down debris. Then employees opened a door 18 X18 inches wide on the side of the hopper and knocked hardened ash from the side of the hopper and around the 24-inch pipe. The second method was by shutting down the furnace, waiting a few hours, opening the 18 X18 inches door wide on the side of the hopper, and knocking the hardened ash with rods from the side of the hopper without having to enter the unit.

Accident:

On January 13, 2010, at 8:00 a.m., Teaford Furnace No.1 was shutdown in anticipation of an inspection of the dryer that was planned for late morning. Green Circle Bio Energy, Inc. had been experiencing operational issues with the dryer, and had notified the manufacturer. The manufacturer wanted to inspect the interior of the dryer with the furnace shutdown for the dryer inspection. During this time, Green Circle Bio Energy, Inc. decided to clean out the ash hopper in the secondary combustion unit because the ash hopper appeared to be plugged. The Victim, Witness 1, and Witness 2 were called into work to clean out the ash hopper. It was their regular scheduled day off, but they were brought in because the furnace was shutdown.

About 11:00 a.m., Witness 3 told the Victim, Witness 1, and Witness 2 to clean out the ash hopper. The Victim and Witness 1 walked toward the ash hopper, and Witness 2 stayed behind to talk with Witness 3 for a few minutes. The Victim walked directly to the ash hopper, and removed the outer 18 X 18 inches door, and removed the refractory

brick (from behind the door) that insulated the hopper wall from the door. The Victim started breaking away the hardened ash from the opening with a metal pipe when Witness 1 arrived. Witness 1 then took his turn at breaking the ash. The consistency of the ash was like glass or concrete. Witness 2 arrived at the hopper, and took his turn at breaking away the ash. Witness 3 stopped by two or three times over an hour to check on the progress of the employees. The Victim, Witness 1, and Witness 2 took turns at breaking away the ash for about an hour, and then they took lunch.

After lunch, the Victim, Witness 1 and Witness 2 were returning to the ash hopper when they saw a manlift stuck in a ditch, so they helped to get it out of the ditch. Witness 1 and Witness 2 stayed at the manlift, but the Victim returned to the ash hopper to finish the process of clearing away the hardened ash. Witness 1 and Witness 2 never returned to the ash hopper, and they both left work at 2:00 p.m.

At the time of the accident, the Victim was working alone clearing the hardened ash from the hopper. He was struck by steam. He called over the radio for help, but when employees responded, the Victim was not able to make any comments to them as to what happened.

Findings:

The Victim was working alone at the time of the accident. It appeared that a hot piece of material dropped from the inside of the hopper into the water conveyor, and created a burst of steam that either, traveled out the 18 X 18 inches door opening, or, out of the openings around the water conveyor, and burnt the Victim's lungs. It could not be determined specifically how the Victim was exposed to the steam.

As was previously explained, ash was cleared from the pipe entrance by two methods. Employees used the company's permit-required confined space program when cleaning by the first method (entrance into the unit). With the second method of cleaning, employees did not use the permit-required confined space program because employees did not have to enter the hopper to clean the area.

The company had been in business for approximately 2 ½ years. There were two identical furnaces with ash hoppers that were required to be cleaned out about every two to three months. There were no indications that they had ever experienced hot ash falling into the water during the ash hopper cleaning process.

Employees wore safety glasses, hard hat, steel toe boots, leather gloves and hearing protection during the cleaning process. Employees were trained to clean out the ash hopper by on-the-job-training.

The employer had the operator's manual for the furnace, but there was no instruction in the manual on how to clean out the hopper. There were no warnings in the manual on any potential hazard of hot material falling into water during the cleaning process. The compliance officer spoke with the manufacturer of the Teaford furnace, and the manufacturer could not provide any documentation that Green Circle Bio Energy, Inc.

could have known of the potential hazard of hot material falling into the water during the cleaning process. The manufacturer stated that it was not aware of this hazard. During the cleaning of the ash hopper, employees removed the 18 X 18 inches door, and used a 10 feet pipe and a four feet metal pipe to knock away the hardened ash. Employees did not enter through the door. They were able to clear away the ash without breaking the plane of the door opening with any body part.

There was a safety complaint filed in the Jacksonville Area Office concerning this accident, and the complaint was initially handled via the phone-&-fax complaint process. In response to the complaint, the company investigated the accident, and contacted the designer/manufacturer/installer of the secondary combustion chamber. Green Circle Bio Energy, Inc. made the following modifications: Replaced water conveyor covers with a thicker/heavier bolt-down design, relocated water level tank for water conveyor system further away from the ash hopper, relocated water conveyor drain valve further away from the ash hopper, installed a retractable soot blower in the secondary combustion chamber ash hopper area to prevent plugging, and installed a vent for steam discharge from the water conveyor. These actions resulted in no employee having to open the 18 X 18 inches door to clean the ash hopper, and made it difficult for steam to escape from the water conveyor.

At about 7:20 a.m. on the day the accident, the ambient temperature in the furnace was about 1,576 degrees, and the ambient temperature at the dryer inlet was about 1,050 degrees. At the time of the accident or about 2:11 p.m., the ambient temperature in the furnace was about 885 degrees, and the ambient temperature at the dryer inlet was about 75 degrees. There were no means to measure the ambient temperature in the secondary combustion chamber at the ash hopper.

The employer had extensive written safety and health programs, and provided safety and health training to its employees. The employer had a site visit from the University of South Florida (USF) Consultation Program in 2009 during which USF conducted a walk-around inspection, and performed personal exposure monitoring for noise and dust.

U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

1851 Executive Center Drive, Suite 227
Jacksonville, Florida 32207-2350
(904) 232-2895 FAX (904) 232-1294
Reply to the Attention of Area Director



June 29, 2010

Green Circle Bio Energy, Inc.
2500 Green Circle Parkway
Cottondale, FL 32431

RE: OSHA Inspection No. 313874877

Dear Sir:

An inspection by the Occupational Safety and Health Administration (OSHA) of your workplace that began on February 8, 2010, disclosed the following hazard:

An employee was exposed to severe steam burns during the clean-out process of the ash hopper in the secondary combustion unit, when he removed the outer door, and used a metal pipe to break the ash, and was struck by steam when hot ash fell into a water conveyor system under the hopper.

Since no OSHA standard applies, and it is not considered appropriate at this time to invoke Section 5(a)(1), the general duty clause of the Occupational Safety and Health Act, no citation will be issued for this hazard.

In the interest of work place safety and health, however, I recommend that you take the following steps voluntarily to eliminate or reduce your employees' exposure to the hazard described above:

Prior to opening the outer door, employees should wait an extended period of time to allow the combustion unit to cool down enough to prevent hot ash from creating steam.

Your support of occupational safety and health is appreciated.

This letter need not be posted.

Respectfully,

A handwritten signature in black ink, appearing to read "James D. Borders", written over a circular stamp or mark.

JAMES D. BORDERS
Area Director