

CSB NEWS CONFERENCE
CON AGRA INVESTIGATION
RALEIGH, NC -- 10 A.M. FEBRUARY 4, 2010
JOHN BRESLAND, CHAIRMAN, CSB
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STATEMENT BY MR. BRESLAND

Good morning and welcome to this Chemical Safety Board news conference.

On June 9 of last year, a massive explosion at the ConAgra Slim Jim plant took the lives of four workers, caused three life-threatening burn injuries and sent a total of 67 people to the hospital.

This accident occurred while the company was in the process of installing and firing up a new industrial water heater for the ConAgra Slim Jim plant, and involved what is known as gas purging in new pipes that were installed some days earlier.

Last October, during the investigation, the CSB issued a Safety Bulletin on the dangers of purging gas piping into buildings. This bulletin – and this issue – is relevant to a large portion of the American workforce, those who manage, install, maintain, repair, inspect, or place into operation fuel gas piping and equipment. Those affected include plumbers, gas installers, maintenance workers, contract supervisors, and industrial facility personnel.

The key lesson from this Bulletin – is the key lesson from the ConAgra accident: purging new or existing gas piping inside buildings can be highly hazardous. This is due to the possible accumulation of gas inside a building.

That is what happened at ConAgra and is what we at the CSB do not want to have happen again.

Tonight the CSB will hold a public meeting in Raleigh. Our CSB investigation team will present preliminary findings and safety recommendations. After hearing from a panel of experts on the subject, and from members of the public who wish to speak, the members of the board – myself, William Wright and William Wark – will vote on the recommendations.

I will review the proposed recommendations in a moment, but first I would like to introduce Donald Holmstrom, who is leading the ConAgra accident investigation. He led the two-year investigation into the BP Texas City refinery accident that occurred in 2005. Mr. Holmstrom heads up the CSB's western regional office in Denver, Colorado.

Mr. Holmstrom.

STATEMENT BY MR HOLMSTROM

Thank you Chairman Bresland.

Our investigation began very soon after the explosion occurred at ConAgra. In addition to the tragic loss of life and the serious injuries, the explosion caused serious and extensive structural damage to the packaging area of the plant. The structural damage was the largest contributor to the deaths and injuries that resulted that day.

The explosion also damaged piping from the plant's large refrigeration system which contained ammonia, a toxic chemical. This release hampered emergency response efforts.

Prior to the accident, ConAgra had begun a project to install a new industrial size, gas-fired water heater at the facility. New gas piping was required for this – a 120 foot long section running horizontally along the roof.

After the piping was installed, it contained air which had to be removed and replaced by natural gas. This process is called purging. Natural gas was fed into the pipe and released through one or more openings in the pipe at the other end near the water heater. The released gas was vented indoors inside a utility room, where the water heater was located.

Over a period of time as contract workers tried unsuccessfully to light the water heater, a large amount of natural gas escaped into the building. It found an ignition source and exploded.

The deaths and injuries were caused primarily by the widespread collapse of the building structure, including prefabricated concrete roofing slabs that are known as “double tees.” Each concrete double tee weighed 11 tons or more; following the explosion, a large number of double tees came crashing down toward the floor more than 20 feet below.

The construction of the building, using pillars, girders, and double tees was such that even a fairly modest explosion would cause big sections of it to collapse.

In the course of our investigation, we were told by companies, fire and building code officials, and inspectors, that purging natural gas piping into buildings is a common practice.

Our next steps in the ongoing investigation are as follows: We will complete a blast analysis to determine overpressures involved in the accident. We will enter the vacuum pump room when it is finally rendered safe. We will examine and test the piping, valves, and water heater igniter to determine if they were functioning properly.

And we will analyze the appropriate location and construction for installation of equipment that presents an explosion hazard.

In light of this tragedy, the CSB investigative staff has concluded that urgent recommendations should be issued to the organizations that create and maintain the national fuel gas codes. These are the codes governing the installation and maintenance of gas equipment and piping that are adopted by state

and local governments, and followed by companies and installers around the country.

The hazards of purging gas indoors need to be publicized, and we need to urge changes in current safety standards for purging.

I will note that after the accident, ConAgra changed its policies to prevent any further purging of flammable gases indoors.

Meantime, our review of the current codes produced by the National Fire Protection Association, or NFPA, and the International Code Council, or ICC, shows the following:

They do not require gases to be vented outdoors.

They do not define adequate ventilation or hazardous conditions. They do not require

evacuation of nonessential personnel. And they do not require the use of combustible gas detectors. That is crucial because relying on the sense of smell to detect the odor of fuel gases is unreliable because of odor fatigue. After a period of time, humans are unable to smell the odor of the gas. And new pipes in particular can also absorb the odorant out of natural gas, making it difficult or impossible to smell.

Therefore, we have drafted key recommendations we think should be adopted to make gas purging safer. Normally, we would include recommendations in our final reports but these can take a year or more to complete. In this case, we are recommending more urgent action be taken well ahead of our final report.

We believe these changes are urgent because the hazards are widespread across industry and because we have learned of additional accidents caused by similar unsafe purging practices. In addition, the three-year cycle for revising the fuel gas code is right underway. Key decisions on purging practices across the country will be made at an NFPA code committee meeting later this month in San Francisco.

For a review of the recommendations, let me turn the podium back to Chairman Bresland.

MR BRESLAND

Thank you Mr. Holmstrom.

The investigation team has presented the board with two recommendations: One directed to the National Fire Protection Association and to the American Gas Association, and one to the International Code Council. These organizations provide the codes adopted nationwide on the use and handling of fuel gases.

The NFPA and American Gas Association are urged to enact a tentative interim amendment as well as permanent changes to the National Fuel Gas Code. The changes would require that during the purging of gas piping, gases be vented directly to a safe location outdoors, away from ignition sources and personnel.

In cases where outdoor venting is not possible, companies would be required to seek a variance from local officials before purging gas indoors,

including approval of a risk evaluation and hazard control plan.

Then, if the purging does take place indoors, the recommendation would require the company to provide safeguards such as the following: Evacuate nonessential personnel from the vicinity. Provide adequate ventilation to maintain the gas concentration at a safe level. And control potential ignition sources.

The recommendation would also require the use of combustible gas detectors to continuously monitor gas concentrations whether vented indoors or outdoors. Also the NFPA and ICC codes should require the training of personnel about the problems of odor fade and odor fatigue; and should include warnings against the use of odor alone for detecting releases of fuel gases.

The second recommendation, to the International Code Council, is for them to adopt the provisions recommended to the NFPA.

As I mentioned, tonight the board will vote on these urgent recommendations, after we have heard the team's investigation presentation, heard from a panel of experts, and after we hear from any member of the public, company official, or worker, who wishes to speak on this accident and on the need for stricter standards.

Let me mention the panel members who will join us tonight: They are Ted Lemoff, who is principal gases engineer with the National Fire Protection Association; Belinda Thielen, labor safety and health trainer with the United Food and Commercial Workers Union, or UFCW, and Chris Noles, who is the Deputy Commissioner, Department of Insurance, Office of the State Fire Marshal for the state of North

Carolina. Mr. Noles by the way will talk about strict regulations that the state has already put in place restricting the purging of gases indoors.

We will also hear from Tom Caldwell of Atlas Engineering, who was one of urban search-and-rescue experts who went into the collapsed building to try to rescue the injured workers. Mr. Caldwell has since been working as a structural consultant to the CSB team to help assure the safety of our team as they do important work inside the plant, which remains an extremely hazardous place.

Now Mr. Holmstrom and I would be happy to take your questions.