

Tank and Petroleum Use Mishaps

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<http://groups.yahoo.com/group/DangerousGoods/>

USA, AK, ANCHORAGE

MARCH 27 2009.

MUD FLOWS IN DRIFT RIVER; OIL TERMINAL STATUS UNCERTAIN MORE FLOODING: OFFICIALS BELIEVE THE DIKE HELD UP, BUT THEY WANT TO GET CLOSER LOOK.

Richard Mauer

An eruption of Redoubt volcano Thursday morning triggered a flood of mud-choked water in the Drift River, but officials were at a loss to say whether it passed harmlessly by the oil facility near the mouth of the river or penetrated the protective dike there.

Rod Ficken, vice president of Cook Inlet Pipeline Co., said remote monitoring equipment on two tanks that each contain 3 million gallons of crude oil showed no change in their level, strong evidence that they remain intact.

But until observers can fly over the Drift River oil terminal and report back, no one will know how high the river reached and whether water and mud got into the tank farm, Ficken said. The facility has no remote video or flood sensing equipment, he said.

The terminal was evacuated Monday morning early in the series of eruptions that have periodically swollen the river and threatened the facility.

Two aircraft chartered by the Alaska Volcano Observatory -- a helicopter and airplane -- were still in the air Thursday evening. Officials on the ground didn't know if they were able to make detailed observations over the Drift River terminal, and results will probably not be reported till today.

An eruption-triggered flood early Monday safely swept past the oil storage area, though some muddy water appeared to have lapped over a protective dike. A deposit of deep mud emerged on the nearby airstrip when the river receded.

Ficken said the engineer who designed the dike during Redoubt's last eruption cycle in 1989-1990, Jim Aldrich, paid a visit to the site Thursday morning by helicopter. He and 10 others had to abandon the area quickly around 9:30 a.m. when the eruption started and the aviation safety code went from orange to red, Ficken said, but Aldrich was satisfied that Monday's flood didn't damage the concrete-clad earthen dike.

"He felt comfortable that it did its job," Ficken said. "He feels right now, at this time, that the integrity is good."

But Aldrich still wants to take a more detailed look at the site. And if floodwaters reached the dike Thursday, that would be all the more reason for further inspection, Ficken said.

Thursday's eruption began at 9:24 a.m. without the warning swarms of earthquakes that marked eruptions earlier this week, Alaska Volcano Observatory geophysicist Stephanie Prejean said at an afternoon press conference. That's to be expected at this stage in the eruption cycle, she said, because lava has plumbed a clear path to the surface and is no longer fracturing the rock in its path. But it also means that a code-red alert signaling an active eruption can occur at a moment's notice.

Seismographic data gave strong indication that a muddy flow had started down the Drift River spurred by melting ice and snow, she said.

In an interview, Ficken said it takes an average of four hours for a flood to reach the Chevron-operated facility, more than 20 miles away.

Sara Francis, a Coast Guard spokeswoman, said at the press conference that officials were planning to begin

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sounding operations at Christy Lee platform, the offshore oil-loading facility for the Drift River terminal. A tanker had been due to arrive in early April to haul oil to the Tesoro refinery in Nikiski, and officials wanted to ensure that sediment from Monday's flood hadn't made loading operations dangerous, Francis said.

If the tanker can safely dock, it might be used to reduce the amount of oil at the facility, Francis said. It's also possible that normal operations at Drift River could resume and that a larger load could be hauled out, she said. What happens will depend on conditions, she said.

The Drift River terminal, built in the 1960s, is an important waypoint in the delivery of oil produced from Cook Inlet platforms operated by Chevron and other companies. Oil is pumped from the platforms in underwater pipes to facilities at Trading Bay and Granite Point, where initial processing occurs.

From there, according to Santana Gonzalez, a spokesman for the Chevron Pipe Line Co., it travels by pipeline to Drift River where it is stored in the tank farm until it is taken onboard a tanker.

Drift River has seven standing tanks, each with an 11-million-gallon capacity. With the decline of the Cook Inlet fields, three of the tanks have been decommissioned and two others are kept empty but on standby.

Earlier this week, the environmental organization Cook Inletkeeper said the two operational tanks should be immediately drained to avoid a catastrophic spill if floodwaters breached the dike.

But Ficken, the pipeline company official, said it's riskier to completely drain the tanks than to leave oil at what operators call the "working level" of a tank -- in this case, about 1.7 million gallons, or a little more than half of what's in each one now.

Preserving oil at the working level, calculated from the tank's size, weight and shape as well as the density of the oil in relation to water, gives the tank greater stability and reduces its buoyancy, he said. That, in turn, makes it less likely it would float off its foundation in a severe flood, which would destroy its usefulness and risk a rupture that would leak residual hydrocarbons into the environment.

Ficken said he isn't worried about the two standby tanks. They won't float because they've been opened, and they've been cleaned, he said.

Ficken estimated that Granite Point, Trading Bay and the platforms themselves have a little less than two weeks of storage capacity before they have to slow or stop production if oil can't be moved to Drift River.

<http://www.iht.com/articles/ap/2009/03/27/news/LT-Brazil-Fire.php>

BRAZIL, SAO PAULO

MARCH 28 2009.

CHEMICAL PLANT BLAST CAUSES HUGE SAO PAULO FIRE

An early morning fire at a chemical depot in a heavily populated neighborhood prompted a series of fiery explosions on Friday, sending residents fleeing and damaging dozens of houses on the edge of Brazil's largest city. Ten were treated for smoke inhalation at the scene and two others suffered unspecified minor injuries as flames leapt hundreds of meters into the air and plumes of black smoke went even higher, according to a statement by city officials. Firefighters sprayed water and special foam on the blaze after it broke out at about 7:30 a.m., but it continued raging for hours amid intermittent explosions that caused flaming mushroom clouds. It was brought under control about four hours after it started. Civil defense officials told local media that residents of about 30 houses plus 150 children from a school were evacuated. Images from the scene showed major destruction, with roads apparently damaged by flaming chemicals and modest homes in the blue-collar neighborhood blackened by the blaze. The depot was a distribution center for chemicals used to make cleaning products like soap and detergent, according to the statement from the city government of Diadema, a Sao Paulo suburb. Officials did not identify the types of chemicals stored at the depot, which was destroyed. Firefighters were investigating the cause of the fire.

<http://www.iht.com/articles/ap/2009/03/27/news/LT-Brazil-Fire.php>

USA, CA, ATWATER

APRIL 2 2009.

TWO MEN BADLY BURNED IN DIESEL TANK EXPLOSION

Victor A. Patton

Two men suffered severe burns when the tank they were working on exploded at a produce business near Atwater on Tuesday.

Employees at the business identified the workers as Fernando Virgen, 39, and Hector Rodriguez, 36.

The accident happened around 7:30 p.m. at A.V. Thomas Produce, the Merced County Sheriff's Department said.

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The two men had been using an acetylene torch on a diesel tank. They were trying to loosen a compression bolt on the tank, but apparently hadn't drained the tank completely, sheriff's spokesman Tom MacKenzie said. The tank, approximately 6 feet long and 4 feet in diameter, blew off one end; the fire engulfed the two workers.

Battalion Chief Kevin Lawson of the Cal Fire/Merced County Fire Department said vapors from the fuel are believed to have caused the explosion.

The men were flown to a burn trauma center in Fresno, where they were listed in critical condition Wednesday. The damage to the building was minimal, Lawson said, because the sprinkler system was activated after the explosion.

Frank Lucas, food safety and security coordinator at A.V. Thomas Produce, said employees have been "shaken up" by the accident. He said the explosion is the first incident of its kind to happen at a produce plant. "We're just praying for the gentlemen," he said.

Lucas said the accident happened in a mechanical shop at the business -- although he didn't know what sort of work the victims were doing. He said no one else saw the incident happen. "We don't know all the specific details yet," Lucas said.

Rodriguez is a shop supervisor with about 15 years experience at the produce plant, Lucas said, while Virgen has worked at the business as a shop hand for about a year and a half.

The state's Division of Occupational Safety and Health is investigating the accident.

<http://www.modbee.com/local/story/650967.html>

CANADA, MANITOBA, WINNIPEG

APRIL 3 2009.

EXPLOSION AND FIRE CAUSES \$2.5M DAMAGE TO WINKLER-AREA BUSINESS

A Winkler-area business was gutted on Tuesday after an explosion set off a smoldering fire that took hours to put out. Fire crews rushed to the scene of the All Size Perforating plant on the outskirts of the town, 130 kilometres southwest of Winnipeg, around 2:30 p.m. "On the [way] there, we saw the flames. They were shooting through the roof," said Winkler fire chief Garry Klassen. "When we got to the scene ... I would guess that half the roof was gone already." The explosion occurred when one of the plant's eight workers was cutting open a barrel, according to Rick Friesen, who owns the company, which manufactures metal floors for grain bins. "It was a discarded barrel from the scrapyard that we use to put our waste in," he said. "Some of them we cut open and some are open already. This one was being cut open and it was not followed by protocol and it blew up on the guy." According to the office of the fire commissioner, the barrel contained flammable residue that was ignited. Within minutes, the entire building was in flames. The employee was treated and released for minor injuries at Boundary Trails Hospital. Friesen said he is grateful no one was seriously hurt, but he is devastated by the loss of his business, which he hopes to rebuild. "I've never experienced something like this before in my life, so it's overwhelming a little bit," he said. Winkler fire crews were being extra cautious dealing with the blaze, since the plant also contained a number of propane tanks, said Klassen. The fire commissioner's office has estimated the damage and loss at \$2.5 million.

<http://www.cbc.ca/canada/manitoba/story/2009/04/01/mb-explosion-fire.html>

USA, AKA, ANCHORAGE

APRIL 3 2009.

PLAN IS TO DRAW DOWN OIL FROM TANKS NEAR REDOUBT

Mary Pemberton

A plan is under way to draw down millions of gallons of oil stored in two tanks near Mount Redoubt - the Alaska volcano that has had 18 major eruptions in the last two weeks but has been relatively quiet in recent days.

The volcano 100 miles southwest of Anchorage began erupting on March 22. Since then, it has produced numerous large explosions that have sent mud and rock cascading down its flanks. Some of that mud and debris has reached the Drift River Terminal, 22 miles away from the volcano.

That has led to concerns that the terminal, where more than 6 million gallons of oil is stored in two tanks, could be damaged and there could be a catastrophic oil spill that would damage Cook Inlet's valuable fisheries.

The Coast Guard said again Thursday that a concrete-enhanced dike surrounding the 42-year-old, Chevron-operated terminal is doing a good job of protecting the tanks.

Plans now are under way to draw down some of the oil in the two tanks. The facility's other five tanks are not in use.

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On Saturday, a Tesoro tanker will be brought to a platform near the terminal to remove some of the oil. The plan is to leave nearly 1.7 million gallons in each tank. Some oil needs to remain in the tanks to prevent them from becoming buoyant and floating away if there was a flood, according to the Coast Guard and officials with the Cook Inlet Pipeline Co. The tanks now are each holding 3.1 million gallons.

The tanker also will be taking on oil from two other facilities that feed Cook Inlet oil to then refill the terminal's two tanks to the current levels through a 20-inch pipe. With the shutdown of the Drift River Terminal, those facilities are either critically short of oil storage capacity or are fast approaching it, said Capt. Mark Hamilton, the Coast Guard's federal on-scene coordinator.

The oil also needs to begin flowing again as it is an important component of the Cook Inlet economy, he said.

"We are looking to remove as much of the product as we safely can," Hamilton said.

During the transfer of oil, Hamilton said the risk that exists now at the facility will not be increased. That means that oil in the two tanks will not increase over its current level of 3.1 million gallons each.

The goal is to remove about 6.2 million gallons from the system.

The pipeline that runs from the terminal to the offshore platform is being tested in preparation for Saturday, Hamilton said. When the oil is off-loaded, it will be taken by tanker to a storage facility at the Tesoro refinery in Nikiski where the fairly light crude will be processed into gasoline and other petroleum products.

In the meantime, the Coast Guard, working with Cook Inlet Pipeline Co. and the state Department of Environmental Conservation, is working on a more long-range plan that will look into, among other things, how often a tanker will be needed at Drift River.

While it is encouraging that a plan is under way to draw down the level of oil in the tanks, it appears that the priority remains the same for the government and oil industry - to keep the oil flowing, said Bob Shavelson, executive director of conservation group Cook Inletkeeper.

One question does not get answered, Shavelson said: "What would it cost Cook Inlet to have a catastrophic spill?"

<http://www.bellinghamherald.com/northwest/story/856444.html>

USA, TX, PORT LAVACA

APRIL 4 2009.

JURY CLEARS FORMOSA IN PLANT EXPLOSION

CALHOUN COUNTY JURY FINDS COMPANY NOT AT FAULT

Sonny Long

A Calhoun County jury refused this week to award damages to seven people who claimed to be injured in the October 2005 explosion and fire at the Formosa plant in Point Comfort.

The seven - Ernest Belmarez, Eddie Guajardo, William Phillips, Norma Mayorga and Raul Saenz Jr. of Port Lavaca, and Chris Shannon and Ramico Ramos of Victoria - were "part of a larger group seeking north of \$50 million" from Formosa and four other defendants, according to a Formosa news release.

"It was a long, hard-fought battle, and we're all disappointed," said Sean Greenwood of Christian, Smith and Jewel of Houston, who represented the plaintiffs. "I felt like our clients were hurt and deserved an award, but I respect the jury system. We are deciding whether we want to appeal."

The plaintiffs, none of whom were employed by Formosa, alleged they received serious back injuries and suffered psychological damage as a result of the fire. They also claimed "post traumatic stress disorder" and sued for pain and mental anguish, loss of wages and medical expense, according to the news release.

The jury voted against awarding any damages to any of the plaintiffs.

"It was a hard-fought trial. We are relieved the jury did not find any of these alleged injuries were caused by the fire at Formosa," Frank Wedig with Formosa Legal Services said in the news release.

The claims stemmed from an incident Oct. 6, 2005, when a contractor's employees backed a forklift with a trailer into a valve, causing a release of propylene gas. The gas ignited and a fire with open-air explosions followed.

Two lawsuits were filed against Formosa as a result of the fire with more than 1,100 claimants. This trial will serve as a test case to help the parties resolve the remaining claims. There is the possibility of additional trials, according to the news release.

Co-defendants in the case were Fernando Rivero, HP Services, U.S. Contractors, Kellogg-Brown and Root. District Judge Stephen Williams presided over the month-long trial at the Calhoun County courthouse.

http://www.victoriaadvocate.com/news/2009/apr/03/sl_formosa_trial_040309_44957/?business

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USA, ALA, BREWTON

APRIL 6 2009.

3 HURT IN RAILROAD TANK CAR INDUSTRIAL ACCIDENT [

Brewton firefighters had to pull three workers from a railroad tank car Friday afternoon after they were overcome by fumes in the enclosed space, officials said. Capt. Ronnie Thomps One man was overcome initially in the tank, but two more men succumbed to the fumes after they went in to rescue him, Thompson said. The man had been applying an adhesive to the tank's side so it could be lined with rubber, Thompson said. One of the men was taken to D.W. McMillan Memorial Hospital in Brewton, Thompson said, and the others were taken by helicopter to a hospital in Pensacola. Thompson said he couldn't identify the men, but they were all alive when they left the facility. Frit staff members had just completed a hazardous-materials safety class earlier this month, according to a company Web site. on, who went into the tank to rescue the men, said the accident occurred at Frit Car, a tank car repair plant, at about 2:25 p.m.

<http://www.al.com/press-register/stories/index.ssf?/base/news/1238879733147940.xml&coll=3>

USA, AK, ANCHORAGE

APRIL 7 2009.

FUEL SPILL CLOSES GOLDBELT BUILDING - EMPLOYEES EXPECTED TO BE ABLE TO RETURN TO WORK BY THURSDAY

Pat Forgey

More than 200 employees were unable to go to work Monday after a weekend fuel spill at the Goldbelt Building.

Only a minor amount of fuel spilled, building manager Tracey Ricker said, but fumes got into ventilation ducts and spread throughout the building.

Ricker said the fuel spilled when an automatic valve on the roof became stuck open and caused a small tank to overflow. She estimated about 40 gallons spilled before it was discovered Sunday.

"It probably had been going on for a very short time, only a few hours, so we were very lucky as far as that goes," Ricker said.

The Goldbelt Building houses the Alaska Permanent Fund Corp., as well as offices of the Department of Education. It is owned by the Permanent Fund.

Permanent Fund spokesperson Laura Achee said stock trading is contracted out to managers elsewhere, but bond trading is done in-house. The fund has backup facilities, but its employees can also work from home, she said.

"They are at home today, and are actively trading," she said.

Ricker said the cleanup was going well, but some fuel-saturated Sheetrock will have to be replaced. She expects employees will be able to return to the building by Thursday.

Environmental engineers are sampling the air quality in the building, she said, and already have found dramatic improvement.

Ricker said there are no damage estimates yet.

http://www.juneauempire.com/stories/040709/loc_426733118.shtml

USA, WASHINGTON DC

APRIL 7 2009.

A LIST OF THE MOST WANTED, BY THE E.P.A.

Cornelia Dean

Albania Deleon started a business eight years ago to instruct and certify workers in the safe removal of asbestos. It was a growth industry, and pretty soon her company, Environmental Compliance Training in Methuen, Mass., was the largest in the state.

Some might say Ms. Deleon, who was born in the Dominican Republic and is a naturalized citizen, was living the American dream.

But not the Environmental Protection Agency, which on Thursday added her to its list of "E.P.A. Fugitives," people who have been charged with violating environmental laws or regulations.

In Ms. Deleon's case, the environmental agency says that hundreds of the people she certified never received any asbestos training. She was convicted in November of 28 counts of fraud, and became eligible for the wanted list when she failed to appear for a sentencing hearing on March 23.

The E.P.A.'s list, complete with mug shots of the fugitives, was established in December to try to draw

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attention to serious environmental crimes.

"We take them seriously, and there are serious consequences," said Doug Parker, deputy director of the agency's criminal investigation division.

Environmental crimes become more common as regulations grow stronger, Mr. Parker added. "All these crimes are driven by money," he said. "When a regulatory scheme is developed, it invariably puts a cost on people. People will use criminal means to avoid compliance, either saving a lot of money or, in Ms. Deleon's case, making a lot of money."

The list includes two men charged with smuggling ozone-destroying coolants, who are believed to have fled to Syria; a man charged in Illinois with building a secret pipeline to funnel pollutants into a tributary of the Mississippi River; and a man, believed to be in Greece, indicted on charges of dumping contaminated grain into the ocean.

Also on the list is Mauro Valenzuela, who the environmental agency says illegally had oxygen canisters loaded into the cargo hold of a ValuJet airliner that crashed into the Everglades in 1996, killing 110 people. The canisters are believed to have fed a fire that brought down the plane.

Mr. Valenzuela was charged with the illegal transport of hazardous materials, among other things. The agency says his whereabouts are unknown.

Mr. Parker said E.P.A. officials started thinking about establishing the list of fugitives after the capture, in Mexico in March 2008, of a man who the agency says walked away from a federal prison in Oregon. The list's "Captured/Surrendered" category says the man, David A. Phillips, was serving time in connection with a series of offenses that began with violations of the Clean Water Act in Phillipsburg, Mont.

Ms. Deleon, 39, who lived in Salem, N.H., was the 21st person — and the first woman — put on the list.

According to the United States attorney's office in Massachusetts, which prosecuted the case, Ms. Deleon was convicted of selling fraudulent training certificates to hundreds of people, some of whom she later hired for asbestos removal work through her temp agency, Methuen Staffing.

Under federal and Massachusetts law, people working in asbestos abatement must complete a 32-hour training session and pass an examination. The government accused Ms. Deleon of having would-be workers sign answer sheets that had already been completed and graded. Then, it said, she sent them out to work at job sites in New England.

The prosecutor's office said many of the people Ms. Deleon trained and hired "were illegal aliens who wished to skip the four-day-long course so that they would not forgo a week's pay."

It said she paid many of them "under the table," without reporting their earnings to the Internal Revenue Service or workers' compensation authorities. The environmental agency said the company closed in 2007.

Mr. Parker said it remained to be seen how many fugitives would be captured because of tips from people who had seen the list, but he said the new Web page had received "a tremendous number of hits."

He said that the E.P.A. had 180 agents "fully authorized with arrest powers, carrying firearms" around the country, but that it usually worked with state, local and federal law enforcement agencies, as well as the Coast Guard, the Homeland Security Department and Interpol.

When people are wanted by the agency, Mr. Parker said, information goes into criminal justice databases in the United States and abroad.

The environmental agency asks people who think they have spotted one of the fugitives to complete a brief online form, notify the local police or, if they are abroad, tell the nearest United States Embassy.

<http://www.nytimes.com/2009/04/06/us/06wanted.html? r=1>

USA, MD, BALTIMORE

APRIL 7 2009.

WORKER INJURED IN CHEMICAL EXPLOSION AT CARROLL PLANT

Richard Irwin

A 27-year-old male employee of a Carroll County firm that produces tobacco flavoring was injured Monday when the lid of a tank containing boiling methylene chloride under high pressure blew off, causing the man to flee before he fell to the floor and sustained injuries to his face, according to the state police at Westminster.

The Baltimore resident, whose name was not released, was treated at the scene before being airlifted to Maryland Shock Trauma Center. His condition was not available.

About 2 p.m., the worker was between 30 and 40 feet from the tank at Tobacco Tech in the 600 block of Liberty Road in Sykesville when the tank's lid blew off, sending fluid and vapors throughout the room, police said. Two other employees pulled the man to safety and took him outside. As a precaution, police closed down a portion of

483, 484, 485, 486, 487, 488, 489, 490

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Liberty Road for about 90 minutes.

Police also removed 55 children from the nearby All About Kids Learning Center by bus and returned them nearly two hours later. Occupants at Athens Health Club, also near the plant, were advised to leave while the scene of the explosion was washed down by firefighters. The incident is being investigated by the Maryland Department of the Environment, the state fire marshal's office and the state's Office of Safety and Health Administration.

<http://www.baltimoresun.com/news/local/carroll/bal-explosion0406,0,394607.story>

USA, NJ. PARSIPPANY

APRIL 8 2009.

INDICTMENT: LINCOLN PK. COMPANY LIED ABOUT LEAKING TANKS - OPERATOR ACCUSED OF FALSIFYING RESULTS TO GENERATE BUSINESS

Peggy Wright

The former operator of a heating oil tank removal company based in Lincoln Park was indicted Tuesday on charges of defrauding hundreds of clients over a two-year period by falsifying test results to generate business for his firm.

A state grand jury handed up an indictment in Mercer County that charges former Lincoln Park resident Albert Taylor, 48, now of Rocky Mount, Va., with conspiracy, racketeering and theft by deception. The charges will be transferred to Morris County for prosecution.

"We charge that this defendant systematically defrauded clients by falsifying test results to generate business," state Attorney General Anne Milgram said in a statement. "This defendant preyed on the fears of customers who were worried about the potential liability posed by a leaking underground tank."

A call to a home in Rocky Mount, Va., was answered Tuesday by a man who said Taylor was not available and refused to take a message.

Authorities said that Taylor operated a tank testing company that did business under such names as Tank Automation, Tank Tek, IDC Tank, All Tank Services, Tank Environmental Service and Computek Services LLC. The indictment alleges that Taylor, from January 2006 to January 2008, charged several hundred clients from \$250 to \$1,200 to have his company evaluate whether their underground storage tank was leaking.

Taylor claimed his company used high-tech equipment to perform two tests on the tanks, but authorities say he did not use equipment necessary for one test and used broken equipment for the second test, or failed to properly use the equipment. Almost every client was told that the evaluation revealed the tank was leaking, Milgram's statement said.

The indictment also alleges that Taylor charged numerous clients from \$325 to \$850 to take soil samples to determine whether tanks were leaking. He had employees add oil to the samples, the grand jury found. After clients were falsely told their tank was leaking, Taylor had his employees recommend Tank Management as a reputable company to remove the structure, without first disclosing that Taylor owned Tank Management, authorities said.

Racketeering and conspiracy are second-degree crimes, punishable upon conviction by up to 10 years in prison. The theft charges are third-degree crimes, punishable by up to five years.

<http://www.dailyrecord.com/article/20090408/COMMUNITIES23/904080401/1005/NEWS01>

USA, FLA, JACKSONVILLE

APRIL 8 2009.

FEDS: T2 CHEMICALS ALWAYS RISKY - JACKSONVILLE PLANT EXPLOSION IN 2007 KILLED FOUR WORKERS

Steve Patterson

The chemical recipe mixed at Jacksonville's T2 Laboratories routinely held huge explosive power that had to be carefully controlled, say federal investigators studying a deadly 2007 explosion there.

What they don't know yet is whether the accident that killed four people and injured 33 others represented an extraordinary mishap or a disaster that had been waiting to happen.

"That's a question we're trying to answer, just how close they were to that limit" of safety, said Daniel Horowitz, public affairs director for the U.S. Chemical Safety Board.

Using reactor chambers the size of soda cans, chemists at the agency created miniature versions of the explosion using T2's normal formula for making a gasoline additive called Ecotane. The recreations showed "extremely energetic chemistry" that could produce amounts of heat and pressure investigators rarely see — even in other chemical explosions — said Robert Hall, the agency's lead investigator in the case.

The agency has compared the explosion that rocked businesses along Faye Road in the Northside to the force

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of detonating up to a ton of TNT. The accident destroyed T2 and badly damaged neighboring buildings.

In a reaction as intense as the re-creation showed, Hall said, "they would have reached a temperature that was kind of a point of no return and they had no way to stop it at that point."

Hall said engineers at the board will study the company's equipment for cooling chemical reactions and venting pressure to gauge how close everyday working conditions would have been to the conditions at the time of the explosion.

A lawyer representing T2, G. Alan Howard, wrote by e-mail that the company hasn't reviewed the chemical board's recreation of the reaction. But he said the company "has been pleased with the professionalism of the CSB team that conducted the investigation."

Meanwhile, the company has signed a deal to settle charges by the U.S. Occupational Safety and Health Administration that worker-safety laws weren't followed.

That agreement was signed in January as a joint request for a panel, the Occupational Safety and Health Review Commission, to issue a final order settling the case. OSHA's area director in Jacksonville, James Borders, said Monday he hasn't received that final order yet.

During negotiations to settle the case, OSHA agreed to drop accusations the company didn't have a written system for warning employees about hazards involved with some chemicals used there. The agency also softened some other charges.

The settlement motion also includes more nuanced statements about the condition of the reactor and a cooling system on the day of the explosion.

The motion, signed by representatives of both sides, says a backup water supply for cooling the reactor chamber wasn't operable the day of the explosion. OSHA initially said the reactor "did not have" a backup water supply that day. The chemical board's review of cooling and pressure systems could help determine how much having that tank operable would have mattered the day of the explosion. Howard previously described the company's 8,000-gallon water tank as being more than enough to cool the reactor. Also, a device to relieve pressure wasn't properly maintained, the motion says.

It also says the 1962-vintage reactor chamber was modified to meet new safety codes but wasn't "stamped," meaning an engineer hadn't certified it complied with modern standards. T2 had said earlier it thought the reactor was certified by the engineering company that installed it.

Howard wrote that the company "did not admit any violation of law and OSHA withdrew several of the alleged violations contained in its original citation."

The company has paid an \$8,600 fine to settle the case, the motion says — a sharp drop from the \$17,550 in fines originally sought. Because T2's production area was destroyed in the explosion, OSHA considers any equipment problems to be resolved once the case is settled, because the workplace hazard doesn't exist anymore.

http://www.jacksonville.com/news/metro/2009-04-08/story/feds_t2_chemicals_always_risky

USA, NC, CHERRYVILLE

APRIL 8 2009.

EXPLOSION SPEWS FUEL, BURNS DOWN SHOP

Diane Turbyfill

Cleatus White dodged flames and metal shrapnel Tuesday morning when a truck's gas tank exploded in his auto repair shop.

The explosion ignited the mechanic's building, a truck, four tractors, four lawn mowers and a school bus. Part of the siding on his home was also singed. "When that thing exploded, it threw gas everywhere," White said. White ran out the back door of the building when the fireworks started, escaping with some minor burns to his face, he said. "I was just lucky to get out," said White.

A mechanic for more than 35 years, White works at a shop next to his house at 2449 Lee Bess Road in Cherryville. He was removing the gas tank on a 2000 Chevy truck to replace the fuel pump. The tank was almost out when it exploded, he said. "Several things could've happened.

Static electricity, gas vapors or an arc from tools being used," said Lincoln County Fire Marshal Mike Futrell. "Any combination of those things could've caused enough to light up the vapors." White has homeowner's insurance but is not sure if the equipment he was repairing will be covered. The truck and other items were owned by his customers.

Despite White's Cherryville address, his home and shop are in a rural portion of Lincoln County, in North Brook Volunteer Fire Department's district. Fire fighters from North Brook, Howard's Creek, Fallston and Hugh's Pond

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Tank and Petroleum Use Mishaps

volunteer fire departments responded in less than 10 minutes, Futrell said.

The fire was under control in about 30 minutes and completely extinguished in an hour and a half, Futrell said. Sheets of tin roofing had to be moved and piles of stacked oak wood doused. Every minute White had to wait was painful, he said. "I had to get out of the way and watch it burn," he said. "What else could I do?"

http://www.gastongazette.com/news/white_32571_article.html/fire_gas.html

USA, MA, NEW BEDFORD, APRIL 9 2009. SELECTMEN TELL BUYER TO EMPTY TANKS AT FORMER GAS STATION

Jane Lopes Middleboro

The prospective buyer of an abandoned Center Street gas station and repair shop has been told to remove an estimated 3,000 gallons of gasoline and diesel fuel from underground tanks by today and to come up with a plan for further cleanup by next Monday night. Otherwise, the Board of Selectmen could vote to revoke the underground storage permit for the property.

Local and state officials urged the board not to let up pressure on the buyer despite acknowledging that without the fuel storage permit the property will be virtually worthless and that the mortgage holders have refused to foreclose on the owner because they are unwilling to take on the liability involved with cleaning up the site.

The owner of the property, Stephen Flood, closed down the building and moved out of state at the end of 2007, Fire Chief Lance Benjamino told the selectmen Monday night, leaving Drake Petroleum Company of Connecticut holding a first mortgage and HarborOne Credit Union also involved as a creditor.

Chief Benjamino said when the Gas and Electric Department shut off electric service to the station, leak detection and monitoring equipment ceased to function and there is no way of knowing whether the gasoline and diesel in the underground tanks is leaking. He said an inspection in January confirmed that about 3,000 gallons of fuel remains in the tanks, along with "large quantities" of unsecured waste and fuel oil inside and outside the former gas station and repair shop.

The chief said the state Department of Environmental Protection, fire marshal's office, state Department of Fire Safety and the town's Health Department and Conservation Commission concur that the situation is hazardous to nearby wetlands and to the public's safety. Hazards include piles of tires that can fill with rainwater and create places for mosquitoes to breed.

"I'm concerned for the groundwater as well as fire safety and the safety of the citizens of Middleboro," Chief Benjamino said.

The prospective buyer, Tony Heneine, who operates a gas station in Fall River, has a signed purchase and sale agreement with Mr. Flood according to attorney Robert Kelley of Braintree, Mr. Heneine's lawyer. Mr. Kelley told the selectmen his client is willing to invest \$5,000 to begin cleanup of the site and to hire a licensed site professional to determine the extent of any hazardous waste that has compromised the site and to establish a cleanup plan. Mr. Kelley said Drake Petroleum and HarborOne have tentatively agreed to contribute \$3,000 each toward the project.

Mr. Kelley said his client is reluctant to invest more in the property until he knows the full extent of the contamination.

The selectmen were initially inclined to grant more time but Town Manager Charles Cristello urged them to be guided by the advice from the fire chief and other officials. Mr. Cristello said it should be a simple matter to have the underground tanks emptied.

<http://www.southcoasttoday.com/apps/pbcs.dll/article?AID=/20090409/PUB04/904090431/1040>

UK, RAWMARSH

APRIL 17 2009.

'HELP ME DADDY': BOY, 9, SCREAMED FOR FATHER AFTER HE WAS BLINDED BY FALL INTO VAT OF CAUSTIC SODA

A nine-year-old boy could be blinded for life after he crashed through the roof of a derelict building and fell into a vat of caustic soda.

Brooklyn Briggs screamed in agony for his father after he suffered horrific burns in the fall.

And last night Gary Briggs described the horrific scene as he rushed to help his son - who had climbed onto a disused workshop roof to retrieve a football.

As he clambered across the roof of the dilapidated building it gave way and he crashed through, landing 15ft below in the tank full of chemicals.

Brooklyn managed to haul himself out of the tank and ran screaming from the building in Rawmarsh, a village two miles from Rotherham, South Yorkshire, with the chemical dripping from his clothes.

He was temporarily blinded but will not know whether he has permanent eye damage until he sees an eye

Tank and Petroleum Use Mishaps

consultant next week.

Brooklyn's parents Gary and Tracey Briggs arrived at the scene minutes later after one of his friends ran to their home 300 yards away to raise the alarm.

Mr Briggs said: 'When I arrived Brooklyn was being ushered along the street. The sight was horrific and shook me to my bones.

'He was red from head to foot. At first I thought it was blood but found out it was caustic soda with red dye.

'Brooklyn couldn't see, his eyes were swollen. Some blood was coming from his chin where he'd struck the roof, and his teeth were damaged.

'He ran into my arms crying, 'Help me Daddy'. The stuff on Brooklyn didn't bother me. I just had to grab him.

'Tracey followed round the corner and was screaming for an ambulance.'

Neighbours brought water to wash the chemical off the boy and towels to keep him warm while they waited for paramedics.

Brooklyn was taken to Rotherham District General Hospital before being transferred to the burns unit at Sheffield Children's Hospital for specialist treatment.

He is having four fluids flushed through his eyes, four times a day and will see an eye consultant next week, who will assess the damage. His condition was today described as stable.

Mrs Briggs said: 'We have been told Brooklyn is lucky to be alive. His face is still swollen and he cannot open his eyes.

'We are desperately worried about his eyes. He has to see an eye consultant next week, who will assess the damage. Both corneas have been burned.'

Adrian Podmore, 27, who ran to Brooklyn's aid when he emerged from the derelict building, said: 'I thought he had been in a car crash at first because he was covered in what I was sure was blood.

'It was red and dripping from him, but it was obviously the chemical now that I know what happened to him.

'There was a woman with him and he was asking her to help him he was screaming in agony. He seemed in a very bad way.'

The caustic soda, which is a strong alkaline, had been used to strip furniture and was abandoned in the building two years earlier by a former tenant.

The substance, also known as sodium hydroxide, can cause chemical burns, scarring and blindness.

As a health and safety investigation was launched both the the owner of the building and the former tenant who left the chemical inside denied responsibility.

Dave Swindells, who used to rent the property before it was left to fall into a state of disrepair, said responsibility for disposing of the chemical lay with the owner.

He said he had moved out because no repairs were ever done to the building in the 14 years he spent there.

'I have heard about the young boy and I hope he is okay,' said Mr Swindells, who runs a furniture restoration shop on Rawmarsh Hill.

'I moved out two years ago and the landlord has had all that time to clear the place. It's his building, so responsibility lies with him.

'I offered to buy the building and I would have done it up and put a proper roof on but he said he had plans for it, something to do with flats, but he has not touched it since I left and it is now worse than it ever was.'

Landlord Les Slater said the chemical was left behind by a tenant who 'abandoned' the building without clearing it out.

A South Yorkshire Police spokeswoman said: 'The boy has been transferred to the Children's Hospital in Sheffield where he is currently stable in the burns unit.'

<http://www.dailymail.co.uk/news/article-1170441/Help-Daddy-Boy-9-screamed-father-blinded-fall-vat-caustic-soda.html>

USA, MO, ST CHARLES CO

APRIL 16 2009. PLANT EXPLODED DURING CHEMICAL REACTION, COMPANY OWNER SAYS

Joel Currier

Authorities on Monday were investigating whether a contaminant disrupted a routine chemical mixing process, causing an explosion Sunday night that burned one worker and rocked parts of St. Charles County.

The main building at the SantoLubes plant at 8 Governor Drive in St. Charles exploded shortly before 10 p.m. Sunday. The only worker inside, Robert Exner, 57, of St. Charles, suffered burns over at least 30 percent of his body. He was in satisfactory condition Monday afternoon at St. John's Mercy Medical Center in Creve Coeur. Exner has been with

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the company for 38 years. His relatives could not be reached Monday.

Two paramedics also were treated for minor respiratory problems.

Exner was mixing ferric chloride and 1,2-methyldioxybenzene in a large tank when it exploded. SantoLubes mixes the chemicals to make protective lubricants often used in airplanes, electronics and insecticides, owner George Garrison said.

Garrison said it was unclear exactly what caused the blast, but he speculated the chemical reaction was somehow contaminated.

"We don't know what happened," Garrison said.

Garrison said the St. Charles facility, which opened in 1962, will be closed "for a long time" while repairs are made.

The fire gutted the inside of the building, which housed several chemicals used to produce insecticides. The explosion caused severe damage to the plant's west wall. Structural engineers and investigators from the Occupational Safety and Health Administration were exploring the facility Monday.

Exner may have been walking away from a mixing tank when the chemicals exploded, which could be why his injuries weren't more severe, a company official said.

Some nearby residents said the blast rattled their homes but didn't appear to cause any structural damage.

"It shook the entire house," said Linda Ramirez, who lives in the nearby Villas at Sterling Pointe subdivision off Zumbahl Road. She said she thought a plane had crashed in the neighborhood.

"It almost sounded like a sonic boom."

Rich Poulsen, another resident of the subdivision, said he was getting ready for bed when he heard the explosion.

"It sounded like a bomb," he said.

<http://www.stltoday.com/stltoday/news/stories.nsf/stcharles/story/913F0F11C092374B862575980004BB72?OpenDocument>

USA, SC, NORWAY

APRIL 22 2009.

BLAST CLAIMS SECOND VICTIM; INVESTIGATION INTO CAUSE CONTINUES

Richard Walker

A second person has died as a result of Monday night's explosion in Norway.

A fuel tank said to contain diesel was part of the explosion that could be heard for several miles around Rutland Timber and Trucking, a family-owned trucking business located about a mile north of Norway.

"I felt it before I got the call, because it shook the house," Norway Fire Chief Billy Morton said. "It rattled all of Norway."

Orangeburg County Coroner Samuella Marshall said that 28-year-old Brian Rutland was declared dead at the scene.

A co-worker, 38-year-old Mickey Williams, was said to be standing near Rutland when the fuel tank went off, blowing one end off of the cylindrical unit. Marshall said Williams died of his injuries several hours later at the Regional Medical Center.

A third man, William Swearingen of North, was several yards away at the time. He is not believed to have suffered serious injury, officials said. The 38-year-old told authorities he saw a blue flame shoot out of the tank.

Investigators say the trio were refueling a tractor-trailer using a homemade system made of booster cables and automotive-type batteries.

"We don't know if it was static electricity or a spark or what," Orangeburg County Sheriff Larry Williams said.

Swearingen told investigators shortly after 8:30 p.m., Rutland and Williams were filling the second of two tanks on a big rig when it appeared the fuelling tank was about empty.

At about 8:39 p.m., Rutland opened the cap of the fuelling tank.

"When we got on scene, there was no flame. It was still smoldering," Morton said.

Morton said Williams had been burned severely but was consciousness enough to give some details.

"He said he was fueling the truck up and it exploded," Morton said. "We found him about 25 feet away."

Firefighters hoped that Williams would survive the ordeal, the Norway chief said.

Officials continue to investigate the cause of the fire. They are also working to understand if gasoline was inside a fueling tanks instead of diesel.

"This is supposed to be diesel," Williams said. "In my experience, diesel fuel doesn't have the combustion rate

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of other fuels. It would be difficult to ignite from an arc.”

Orangeburg County Fire System Coordinator Gene Ball said, “There’s something very unusual here. This is a topic of discussion all across the country. Even the state fire marshal called me and asked what in the world was going on.”

Morton said he began to wonder when he was treating the injured Williams. The stricken man said he had been filling the truck with diesel.

“When he said diesel fuel, I said in the back of my head, ‘How could that be?’” Morton said. “Next to no way diesel fuel would erupt like that under any circumstances.”

State Law Enforcement Division spokesperson Jennifer Timmons said that agency has sent arson and crime scene agents to assist with the case.

Morton has seen his share of fires and even some explosions. None have been like Monday’s.

“No, sir. No, sir,” Morton said. “I’ve been in the Norway Fire Department 23 years. I have never seen one like this before.”

<http://www.thetandd.com/articles/2009/04/22/news/doc49ee822dbc251528150406.txt>

USA, W.VA, CHARLESTON

APRIL 22 2009.

BAYER SAFETY LAPSES 'COULD HAVE ECLIPSED BHOPAL' FIRM 'ENGAGED IN A CAMPAIGN OF SECRECY,' DOCUMENTS SHOW

Ken Ward Jr.

Significant safety lapses by management of Bayer CropScience's Institute plant caused a fatal August 2008 explosion that could have turned into a disaster worse than Bhopal, according to evidence presented Tuesday to a congressional committee.

Bayer plant officials continued to use long-deficient equipment, leading employees to bypass safety gear in the plant's Methomyl-Larvin unit where the explosion occurred, U.S. Chemical Safety Board officials told a House subcommittee.

The runaway explosion sent a 5,000-pound chemical vessel rocketing into the air and across the plant, where it could have easily smashed into a nearby methyl isocyanate tank, "the consequences of which could have eclipsed the 1984 disaster in India," congressional committee staffers concluded in their report.

"Had I known then what I know right now, I would have ordered an evacuation," Kanawha County Commission President Kent Carper said after testifying and listening to other witnesses at the hearing of the House Committee on Energy and Commerce's Subcommittee on Oversight and Investigations in Washington, D.C.

John Bresland, chairman of the federal Chemical Safety Board, said his agency's investigation has so far determined that Bayer didn't properly train plant operators to use a new computer control system, overworked employees and did not correct deficient procedures discovered at least a year prior to the explosion.

The explosion occurred in a unit where Bayer makes methomyl, which it then uses to produce Larvin, the company's brand name of the insecticide thiodicarb.

But the Institute plant is best known for its production and use of methyl isocyanate, or MIC, the chemical that killed thousands of people when it leaked from a Union Carbide plant in Bhopal, India, in December 1984.

Bayer uses MIC to make methomyl, and the methomyl unit includes a "day tank" that can hold nearly 40,000 pounds of MIC. That tank is located about 80 feet from the location of the August explosion.

Bresland told lawmakers the explosion occurred while workers were restarting the unit after a long maintenance shutdown period. Equipment had been replaced, and a new computer control system installed. But workers were not adequately trained on the system prior to startup, Bresland said.

More specifically, the explosion occurred in a "residue treater," a tank where waste methomyl and other chemicals were recovered to be burned in the plant's power house. But Bayer had for some time been using an undersized heating unit on the residue treater, and this forced plant operators to bypass critical safety systems intended to prevent methomyl from flowing into the vessel until it reached a certain temperature.

Investigators also concluded that operators had not pre-filled the treater vessel with heated solvent, as required by the startup procedure.

<http://sundaygazette.com/News/200904210805>

Tank and Petroleum Use Mishaps

USA, W.VA, CHARLESTON

APRIL 22 2009.

BAYER EXPLOSION 'DANGEROUSLY CLOSE' TO SECOND BHOPAL

Lorraine Woellert

Executives at Bayer CropScience AG conducted a "campaign of secrecy," destroyed evidence and withheld information from emergency responders after a deadly chemical explosion, congressional investigators said.

A report released by investigators on the House Energy and Commerce Committee led by Representative Henry Waxman found that the August 2008 explosion at Bayer's plant in Institute, West Virginia, "came dangerously close" to igniting several tons of methyl isocyanate, or MIC, a toxic chemical that killed about 4,000 people after a leak in Bhopal, India, in 1984.

The committee's oversight and investigations panel heard testimony today from Bayer officials and members of the Chemical Safety Board, which is investigating the accident.

On Aug. 28, a pressurized waste tank containing Methomyl exploded, sending a fireball hundreds of feet into the air. One Bayer employee was killed instantly and another suffered third-degree burns and died more than a month later. Eight other people, including six emergency responders and two contract employees, reported symptoms of chemical exposure.

In transcripts of radio communications among fire, police, and emergency medical personnel obtained by the committee, first responders repeatedly complained that "we can't get through to the plant" and "we have no contact with anybody from the plant."

'Breakdown' in Communication

"We acknowledge fully we had a breakdown in these communications," Bayer CropScience Chairman William Buckner told the subcommittee. "We have the process in place to make sure it doesn't happen again."

Bayer CropScience is a unit of Leverkusen, Germany-based Bayer AG. Its West Virginia plant is the only site in the U.S. that produces and stores large amounts of MIC, which is a component of Methomyl.

In testimony given to the committee's oversight and investigations panel, Chemical Safety Board Chairman John Bresland said Bayer officials told emergency personnel on the day of the explosion that "no dangerous chemicals had been released."

"That statement is clearly incorrect, since Methomyl is toxic and its uncontrolled decomposition may release highly toxic byproducts," Bresland said. The Chemical Safety Board is an independent federal agency.

The explosion ruptured and threw a 2.5-ton steel tank through the plant. Had it struck the MIC container, "the subcommittee today might be examining a catastrophe rivaling the Bhopal disaster," said Representative Bart Stupak, a Michigan Democrat and chairman of the oversight subcommittee.

Blast Mat

The subcommittee accused Bayer of removing and destroying a protective steel screen, or blast mat, that hung over the MIC tank, which Bayer spokesman Bryan Iams said was not true.

The mat, Iams said in a phone interview, remains on the site and has been examined by chemical board investigators.

"The blast mat remains on our site," Iams said. "We did not destroy evidence."

Daniel Horowitz, director of the chemical board's office of congressional and public affairs, said investigators did see the mat immediately after the explosion, but said that Bayer then moved the equipment without notifying or consulting with investigators first.

"We examined it when it was hanging there," Horowitz said in an interview.

Disabling of Cameras

The panel also found that a Bayer contractor disabled the plant's surveillance cameras, depriving investigators of "critical video footage of the explosion." The removal of the protective blast mat prevented "further analysis of damage caused by shrapnel and debris," the committee report found.

The report accused Bayer of using a media and legal strategy to limit public disclosure about the accident. In an internal Bayer "community relations strategy" memo obtained by the committee, Bayer's public relations firm recommended undermining local community groups and news outlets, the report said.

Buckner said "business reasons," including "a desire to limit negative publicity," partly motivated the company's decision.

He told the committee the company thought it could "refuse to provide information" to the Chemical Safety Board and began labeling documents as secret. The company used the Maritime Transportation Security Act of 2002, a homeland security law, to declare documents it turned over contained "sensitive security information" that could not

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be made public.

Training Records

Bresland said that of 10,000 pages of documents submitted to the chemical board, about 12 percent were marked as sensitive security information and therefore not public. Some of those documents included operator training records and prior incident reports that already are public information, Bresland said.

Buckner said the company's action was in part based on the opinion it received from an outside lawyer. "We fully acknowledge the need for further guidance" on this issue, he said.

Stupak said he will seek to amend the Maritime Transportation Security Act, which is up for renewal this year. He said he is exploring whether companies should be subject to financial penalties when they exceed the scope of the act.

Description of Blast

The explosion at the plant, which occupies more than 400 acres on the Kanawha River, broke windows and cracked walls at buildings several miles away.

The blast occurred at about 10:30 p.m. as workers were bringing the plant back on line following an extended shutdown for maintenance work. Chemical board investigators found that a deficient heater at the facility made it impossible to get the plant running without bypassing safety features.

Workers had a longstanding practice of bypassing valves meant to protect against high concentrations of Methomyl, which "decomposed in a sudden and violent runaway reaction," Bresland testified.

The blast sent metal projectiles, some weighing 100 pounds, in all directions, he said.

The chemical board will release details of its investigation in two days at a public meeting in Charleston, West Virginia.

<http://www.bloomberg.com/apps/news?pid=20601087&sid=aOnvwuLxIF.Y&refer=home>

USA, W. VA, INSTITUTE

APRIL 23 2009.

[PRELIMINARY FINDINGS]

CSB INVESTIGATORS REPORT BAYER CROPSCIENCE EXPLOSION WAS CAUSED BY RUNAWAY CHEMICAL REACTION; CITE SIGNIFICANT LAPSES IN PROCESS SAFETY, OUTDATED OPERATING PROCEDURES

A large explosion and fire that took the lives of two workers at the Bayer CropScience (Bayer) plant last August was caused by a thermal runaway reaction during the production of an insecticide. The event likely resulted from significant lapses in chemical process safety management at the plant, U.S. Chemical Safety Board (CSB) investigators said today in preliminary findings released at a news conference here.

The blast on August 28, 2008 in Institute, West Virginia occurred as the runaway reaction created extremely high heat and pressure in a vessel known as a residue treater, which ruptured and flew about 50-feet through the air, demolishing process equipment, twisting steel beams, and breaking pipes and conduits. Two operators died as a result.

Eight workers reported symptoms of chemical exposure, including aches and intestinal and respiratory distress, including two employees of the Norfolk Southern railway company and five Tyler Mountain, West Virginia volunteer firefighters, and an Institute, West Virginia volunteer firefighter. Two sought treatment at a hospital emergency room the next day, were treated, and released.

Releasing preliminary findings prior to a planned CSB public meeting in Institute, CSB Board Chairman John Bresland said, 'Our investigation is continuing, but we are here to brief the community about what we know at this point.'

'The explosion at Bayer was a very serious and tragic event that could have had additional grave consequences. There were significant lapses in the plant's process safety management, including inadequate training on new equipment and the overriding of critical safety systems necessitated by the fact the unit had a heater that could not produce the required temperature for safe operation,' the Chairman said.

'The explosion occurred within 80 feet of a pressure vessel containing more than 13,000 pounds of methyl isocyanate, or MIC, a raw material for the pesticide the company was making at the time, and the same chemical that caused death and injury in the Bhopal accident 25 years ago,' Chairman Bresland said.

He added, 'As our investigation continues, we will look further into the issues surrounding the safe placement of the tank and its potential vulnerability. We note that other chemical companies, notably DuPont, no longer store MIC in their chemical production and we are looking into other systems that make and then immediately use the MIC, eliminating the need for storage.'

Bayer CropScience in Institute is a large chemical complex of more than 400 acres that was first constructed in

Tank and Petroleum Use Mishaps

the 1940's. Until 1986, it was owned by Union Carbide which produced carbamate pesticides at the site. It was acquired by Bayer in 2002, and now has more than 500 employees.

CSB Lead Investigator John Vorderbrueggen noted the accident occurred after an extended maintenance shutdown of the entire Methomyl section of the Larvin pesticide-manufacturing unit. (Methomyl is used to make Larvin).

Mr. Vorderbrueggen said, 'Prior to starting up, Bayer had recently upgraded the computer control system for the unit, replacing a Honeywell system with one purchased from Siemens. The control screens were completely different - and Methomyl production equipment control was changed from a keyboard to a computer mouse - yet operators had not been fully trained and prepared to operate the complex process equipment on the new system. Furthermore, the written operating procedures for the unit were significantly out of date and did not adequately address all process equipment startup and normal operating steps.

Mr. Vorderbrueggen said that the residue treater, a large pressure vessel, had an undersized heater. 'According to unit operators, the heater for the residue treater was incapable of reaching the required temperature to begin the controlled decomposition of Methomyl.'

As a result of the longstanding heater problem, operators had to use a workaround. This involved defeating safety interlocks controlling flow into the residue treater vessel. The CSB found a normalized practice outside of operating procedures of starting to feed Methomyl into the vessel below the required temperature in order to create the necessary heat for the startup. But bypassing the interlocks made it more likely that too much Methomyl would enter the vessel. Safety analyses, and the operating procedure warned that Methomyl concentration above one percent inside the residue treater would likely cause it to violently rupture.

'As a result of equipment deficiencies, improper procedures and lack of training on brand-new computerized control equipment,' Mr. Vorderbrueggen said, 'the vessel was charged with as much as a 20 percent solution of Methomyl in solvent, whereas the residue treater was designed to safely decompose the chemical at a concentration of less than one percent in solution.'

The CSB reported that operators attempted to check the residue treater vent system as the pressure rose. But the residue treater ruptured, suddenly released 2,500 gallons of Methomyl-solvent liquid and chemical decomposition products.'

'These equipment deficiencies and procedural deviations were never subjected to formal management-of-change reviews to assess their safety - a key requirement of the OSHA process safety management (PSM) standard,' Chairman Bresland said.

The CSB is examining operator fatigue as a possible contributor to the accident. Unit operators worked very high overtime levels during the three months prior to the accident, averaging almost 20 hours a week of overtime. Operators repeatedly worked 12 hour days, and sometimes up to 18 hours, with very few days off. Chairman Bresland said, 'We are concerned about the potential for operator fatigue, which can of course be an important factor in major accidents.'

'Our preliminary information clearly indicates that, as I told a Congressional committee investigating the Bayer accident yesterday, the accident could have been prevented. Understanding why all these factors came together on August 28 remains a focus of our investigation.'

Mr. Bresland said it was fortunate that pieces of the ruptured vessel did not impact the pressure vessel containing highly toxic methyl isocyanate, known as MIC, which was located approximately 80 feet from the explosion site. 'An impact on this tank could have the potential of causing a release of MIC which could cause injury or death to those exposed,' Mr. Bresland said. The tank is surrounded by a large wire-rope protective mesh shield designed to prevent impact. He said the CSB plans to study the design basis for the protective shield to determine whether the MIC tank is appropriately located and protected.

In addition to a discussion of the chemical process involved and the timeline of events leading to the accident last August, the CSB community briefing this evening will include a review of emergency response communications problems, chemical exposure symptoms for Methomyl and methyl isocyanate (MIC), and placement and protection of the MIC storage vessel. Chairman Bresland noted the CSB investigation is continuing, and that safety recommendations will be issued in the final report, expected later this year.

The CSB public meeting will begin at 6:30 p.m. at the West Virginia State University Wilson Building, Multipurpose Room, 103 University Union, in Institute. The meeting is free and open to the public. Pre-registration is not required. The agenda calls for the CSB investigation team community report, followed by a panel including the following: Nick Crosby, Vice President and Site Leader, Bayer CropScience; Dennis Hendershot, a chemical process safety expert; Sterling Lewis, West Virginia State Fire Marshal; Michael Flynn, health and safety director for the

Tank and Petroleum Use Mishaps

International Association of Machinists union; Maya Nye, People Concerned about MIC; and Dale Petry, Kanawha-Putnam County Emergency Management Director.

The CSB is an independent federal agency charged with investigating industrial chemical accidents. The agency's board members are appointed by the president and confirmed by the Senate. CSB investigations look into all aspects of chemical accidents, including physical causes such as equipment failure as well as inadequacies in regulations, industry standards, and safety management systems.

www.csb.gov

USA, OH, NEWPORT

APRIL 24 2009.

TANK FIRE AT OHIO OIL GATHERING COMPANY OUT

After battling a tank fire in Newport for hours Thursday, fire officials have determined what sparked the blaze that sent two people to the hospital.

Over thirteen fire departments from Ohio and West Virginia responded to the fire at Ohio Oil Gathering Corporation Thursday.

Newport fire officials say workers were grinding a spot to fix a hole on the roof of a brine tank when a spark ignited the fire.

Washington County Sheriff Larry Mincks says 19-year-old Joshua Melton suffered burn injuries and was taken by helicopter to Cabell-Huntington Hospital. He was in good condition in the intensive care unit Friday evening.

Officials says another man was taken to the hospital but he was not injured.

Updated 11:49 PM 04/23/09

A Washington County Sheriff's Office dispatcher confirmed that the brine tank that was on fire Thursday afternoon was out by 7:30 p.m. Thursday.

The state manager of Ohio Oil Gathering, Bob Gerst, said two contracted employees who work for Welding, Inc. out of Charleston were placing a metal plate on top of a brine tank when the tank caught on fire.

Washington County Sheriff Larry Mincks said 19-year-old Joshua Melton was taken by helicopter to the Cabell-Huntington Hospital for burn injuries. He was listed as being in fair condition Thursday night.

Sheriff Mincks said another man was on the scene but apparently was not injured. Earlier Thursday afternoon, Gerst said the other man was taken to the hospital but it appeared he may have had minor injuries.

A Washington County sheriff's captain said close to 12 p.m. Thursday an employee called dispatchers and said a worker was injured.

Once responders got to the scene, they found a storage tank on fire.

Gerst said it is a brine tank. Fire officials said there was about 1 foot of oil, between 6,000 and 7,000 gallons, inside the tank that burned.

Marietta Fire Chief Tom Dempsey said underneath the metal exterior was a wood structure that was also burning Thursday afternoon.

The cause of the fire is under investigation at this point but Gerst said a spark from the oil vapors could be the cause. He said there were no open flames when the men were working atop the tank.

Marietta Fire Chief Tom Dempsey said firefighters had to be careful about how much water they used because the fear was that the water could turn to steam and over-pressurize the tank, causing it to explode.

Eventually firefighters peeled back the roof with high pressure hoses to break into the roof and the roof caved in.

Shortly after 5 p.m. Sheriff Larry Minks said the roof collapsed and the fire became hotter. A Washington County Sheriff's Office dispatcher said responders were able to put the fire out and left the scene close to 7:30 p.m.

As of 4:00 pm:

Firefighters are now using high-pressure hoses to "break into the roof" of the tank to get to the burning wood inside.

As of 3:43 pm:

Many volunteer fire departments are refilling their tanker trucks at the the Willow Island locks and Dam, about a quarter of a mile south of the fire.

As of 2:50pm:

WTAP has learned that the tank belongs to Ohio Oil Gathering Company.

The company is a storage facility and hub for crude oil transportation and a brine oil field.

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Tank and Petroleum Use Mishaps

An official with the company says six people work at the site and most of them are employed as tank truck drivers.

The spokesperson tells us that the tank that caught fire contains crude oil and they are unsure what caused the blaze.

Marietta Fire Chief Tom Dempsey says the tank has a 34,000 gallon capacity. He says he believes 6,000 to 7,000 gallons of oil are still in the tank at this time.

Authorities tell us the fire started while a few employees were performing maintenance on the tank.

That's when they say something occurred to ignite the flame.

They also say a 19-year-old man was burned in the fire and has been taken to an area hospital.

The 13 fire departments that are on scene include two from area industrial plants.

Krayton's and Solvay's industrial fire units are on scene.

Chief Dempsey tells us the fire is almost completely under control but they're being careful of how much water they spray onto the tank.

The fear is that if too much water gets on the tank, the water will turn to steam and the build up of pressure could cause the tank to burst.

Stay tuned to WTAP News at 5 and 6 for the latest details

As of 2:15pm:

13 different fire departments have responded and continue to leave the scene and return, needing to retrieve more water.

Small flames can still be seen at the top of the tank.

No one on the scene can confirm what the tank contains.

As of 1:29pm:

One of the tanks in an oil tank farm near Newport, Ohio, is on fire.

There are reports of at least one injury.

The oil tank farm is off of Ohio Route 7 in Washington County.

Fire can be seen coming from the top of the tank. Smoke also is rising from the top of the tank.

It's not known at this time what triggered the fire.

At least a half dozen fire department vehicles are at the scene, trying to keep the tank cool with water. At least two ambulances are also on standby at the scene.

<http://www.wtap.com/news/headlines/43551477.html>