

LUXE LIFE

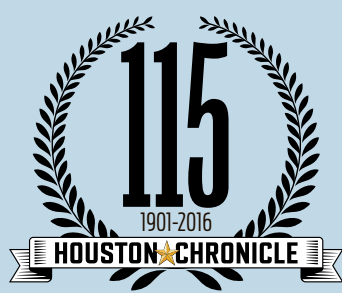


Travel, trends and the styles of the summer **Section M**

SPECIAL SECTION

Houston History

A look at people, events that shaped this city **Section N**



More than **\$200** in coupons inside today
Total savings this year: **Over \$6,375**

HOUSTON CHRONICLE

Sunday, May 22, 2016 | HoustonChronicle.com and Chron.com | Vol. 115, No. 222 | \$4.00 ★★

Chance of storms, High 85, Low 72

'It will take another disaster'

Second in a series

CHEMICAL BREAKDOWN

By Mark Collette and Matt Dempsey

In an instant, his face was on fire.

Flames burned Anselmo Lopez's arms and chest, and the explosion knocked back three co-workers whose eardrums burst.

Lopez had been doing

A dangerous mix develops when federal safety rules are unenforced and chemical companies are left to police themselves

maintenance last October, pumping inert nitrogen through pipes at the SunEdison plant outside Houston, to flush out a highly volatile gas called silane.

When his crew opened a valve, silane leaked and combined with air. The mixture ignited.

Though SunEdison over the years had paid thou-

sands in fines from the U.S. Occupational Safety and Health Administration, safety remained a problem. Lopez's injury — which would require multiple skin grafts and lifelong care — was the fifth time in nearly a decade that the plant had a toxic release, fire or serious safety violation.

It's unusual that OSHA **Some continues on A20**



Michael Ciaglo / Houston Chronicle

The flooring is all that remains of a house damaged three years ago in a massive explosion at the West Fertilizer Company.

Taliban leader believed killed

By Alan Fram and Lolita C. Baldor
ASSOCIATED PRESS

WASHINGTON — The U.S. conducted an airstrike Saturday against Taliban leader Mullah Mansour, the Pentagon said, and a U.S. official said Mansour was believed to have been killed.

Pentagon press secretary Peter Cook said the attack occurred in a remote region along the Afghanistan-Pakistan border.



Mansour

He said the U.S. was still studying the results of the attack, essentially leaving

Mansour's fate uncertain. But one U.S. official not authorized to discuss the operation publicly said Mansour and a second male combatant accompanying him in a vehicle were probably killed. This official said the attack was authorized by President Barack Obama.

Cook said Mansour has been "actively involved with planning attacks" across Afghanistan. He called Mansour "an obstacle to peace and reconciliation" between the Taliban and the Afghan government who has barred top Taliban officials from join-

Mullah continues on A6

ECOLOGY

ELUSIVE DOLPHINS



James Nielsen / Houston Chronicle

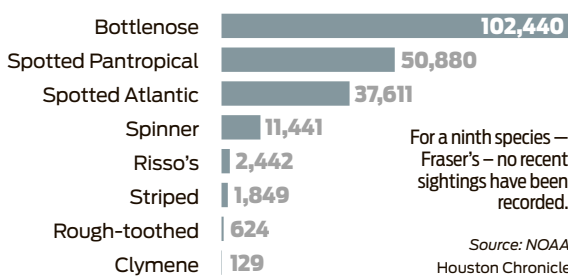
A bottlenose dolphin jumps out of the water in front of a ship Wednesday in Port Aransas.

Six years after the Deepwater Horizon oil spill, scientists are still skimming the surface of the Gulf's mammal populations

By Lauren Caruba

Dolphins in the Gulf

Most recent estimates by the National Oceanic and Atmospheric Administration of the number of dolphin species commonly found in the Gulf of Mexico:



KRISTI Fazioli slowed the Boston Whaler and cut the engine when a fin finally emerged where the Houston Ship Channel passes Bolivar Peninsula. At the bow, Sherah Loe, a graduate student, readied her camera.

"Anybody have eyes on them?" Loe asked. "No," Fazioli replied, with a laugh. "Just that one."

"They're sneaky," Loe said.

The group of researchers grew quiet

and scanned the ripples. A minute slowly passed.

Then a dolphin leapt from the bay, its body glinting in the sun for a split second. Fins and tails belonging to at least nine animals, includ-

ing two calves, quickly sluiced through the water. For 15 minutes, they swam around the boat, almost close enough to reach out and touch.

Fazioli heads the Texas Bottlenose Dolphin

Research Collaborative, counting and cataloging the mammals as she and other researchers across the Gulf of Mexico try to rectify what the Deepwater Horizon disaster underscored — humans know close to nothing about local bottlenose dolphin populations, which can provide a wealth of information about the environment.

The Marine Mammal Protection Act, as amended in 1994, requires the National Marine Fisheries Service to study and report on dolphin species, population estimates, reproductive **Dolphins continues on A4**

Agency paid fired workers not to sue

Bush kept dozens on land office's payroll for months

By Brian M. Rosenthal

AUSTIN — Texas Land Commissioner George P. Bush has spent nearly \$1 million in taxpayer money to entice dozens of people fired by his administration to agree not to sue him or the agency, a practice that may run afoul of a ban on severance pay for state workers.

Bush, a first-term Republican, has directed the General Land Office to keep at least 40 people on the payroll for as long as five months after ending their employment, according to an analysis of records obtained by the Chronicle. The ex-staffers did not have to use vacation time and, in fact, continued to accrue more time for as long as they were on the payroll. In return, they agreed in writing not to sue the agency or discuss the deal.

Many of the recipients were top aides to former Land Commissioner Jerry Patterson who were fired during an agency "reboot" in which Bush replaced more than 100 employees.

Such separation arrangements are made frequently in the corporate world but are not allowed in Texas government, where there is no severance and staffers generally are required to work to be paid, according to employment lawyers, union leaders and former state officials.

"I can understand the thinking of an agency head who wants to get rid of someone and thinks that this is an easy way to do it, but this is not the way to do it," said Buck Wood, an ethics expert and former deputy state comptroller, noting the detailed rules that govern how agencies **Separation continues on A6**

Cronin ready to turn the page as 'Passage' trilogy ends

By Alyson Ward

Justin Cronin fans know the story. A decade ago, he'd jog his Memorial-area neighborhood while his daughter Iris, 8, pedaled along beside him on her bike. Together on those outings, they wove a plot for a fantastic story

filled with vampires, a virus and — at Iris' request — "a girl who saves the world."

Back then, Cronin was a Rice University professor who had written a couple of quiet literary novels. But when he committed that "girl who saves the world" story to paper,

it turned into "The Passage," a best-selling novel that catapulted his writing career from respectable to runaway success. Part one of a trilogy, "The Passage" made millions and turned Cronin into a household name.

"The City of Mirrors," the final installment in

Cronin's trilogy, will be released Tuesday, and on Thursday the author will celebrate with a "block party" on Bissonnet Street. He'll appear at two local independent bookstores, then sign copies of the book and greet fans at the bar across the street. "It's a good way to do it

here in my hometown," says Cronin, who was born in Boston and raised in New York. Houston, he explains, "is where I've lived my life, especially my writer life."

With the publication of "The Passage" in 2010, everything changed in that **Cronin continues on A9**

Index

Books G4 | Dining G12 | Horoscope G15 | Outlook B11
Business D1 | Directory C10 | Lottery C10 | Sports C1
Crossword G13 | Editorials B13 | Obituaries B8 | TV G13

Chron.com | HoustonChronicle.com | @HoustonChron | Houston Chronicle
Houston's Source for Breaking News Go to Chron.com throughout the day for the latest stories, photos and video from Houston's No. 1 news site.





PROUD PARTNER OF THE HOUSTON ASTROS

PREPARED in our STORE

Prices effective: Sunday, May 22 thru Tuesday, May 24, 2016



Fresh Made In Store Daily Taco or Hamburger Fixin's or Stuffed Mushrooms

\$5 ea



Fresh Made In Store Daily Fruit Bowls
24 oz. Watermelon, Cantaloupe, Honeydew, Pineapple, Sliced Apples or Melon Medley
Single Price: \$3.99

3 \$10
for
When You Buy 3 Or More
Card Price



Fresh Made In Store Daily Guacamole
Spicy or Regular

3.99 ea
Card Price

CHEMICAL BREAKDOWN



Michael Ciaglo photos / Houston Chronicle

A memorial cross is planted in West near the spot where 15 people died, including a dozen firefighters who raced in unaware of the dangers at the plant.

Some 400 inspectors for about 15,000 plants

Some from page A1

inspectors had been there at all.

Most Americans don't know about chemical stockpiles near homes and schools, and often, the government doesn't, either. The U.S. regulatory system is poorly funded and has outdated, complex rules that go unenforced, leaving facilities that handle hazardous chemicals mostly to police themselves, a Houston Chronicle investigation found.

The result: A government that reacts only to the worst accidents and does little to prevent them, even though the same mistakes keep happening.

OSHA doesn't have enough inspectors to perform its mission, and its fines are paltry, even by its own measure.

The Environmental Protection Agency left gaping holes in its regulations despite its own calls for change and the president's mandate to make improvements.

And the U.S. Chemical Safety Board plugs along with a tiny budget, taking on massively complicated investigations and issuing recommendations that go largely ignored by federal agencies.

Not enough inspectors

Chemical safety experts from around the world gathered last year in Austin for the Global Congress on Process Safety.

Presenters and attendees talked in industry jargon — about good engineering practices and hazard studies and using data to recognize potential dangers.

Everyone was reminded about the importance of constant vigilance.

When someone wanted to lighten the mood, he'd bring up OSHA. As a punch line.

Some at the conference had

little faith that OSHA inspectors are qualified to evaluate chemical process safety, and even when they are, there aren't enough of them.

OSHA is charged with protecting American workers but has 1,840 inspectors — roughly the same since 1981 — for 8 million U.S. workplaces. Inspecting every facility one time would take 145 years, according to the AFL-CIO.

Only 267 OSHA inspectors have specialized training for about 15,000 chemical facilities.

In 2011, the agency began a chemical emphasis program, but it looks at a relatively small number of plants. An analysis by the Chronicle and researchers at the Texas A&M University Mary Kay O'Connor Process Safety Center ranked thousands of facilities in greater Houston on their potential to harm the public. OSHA did not inspect most of the top 55 facilities in the last five years.

Dr. Sam Mannan, director of the O'Connor center and one of the nation's preeminent experts on chemical safety, advocates for third-party inspections because federal agencies aren't doing enough. The EPA is embracing the idea in a proposed rule change, over the strong objections of industry.

Rigorous enforcement creates a dialogue between government and industry, Mannan said, and ensures that companies breaking rules don't fall through cracks.

OSHA penalties are mostly unchanged since 1990. Fines for four deaths after a preventable gas leak in November 2014 at the DuPont plant in La Porte totaled \$372,000. That's about half of 1 percent of an average day's revenue for the corporation.

The head of OSHA, Assistant Labor Secretary David Michaels, told a Senate panel in December



Administrator Rose Ann Morris raced to the nursing home in West as soon as she realized the nearby plant was on fire. When she arrived, she was surprised to find the residents alive.

2014 that "our criminal penalties are virtually meaningless."

The imbalance between fines for environmental violations and catastrophic safety problems can reach the absurd.

In 2001, a sulfuric acid tank exploded at a refinery in Delaware, killing Jeff Davis.

"His body had virtually decomposed," Michaels said.

Workers had long warned the company about problems with the tank. OSHA issued a \$132,000 fine. Because the incident polluted air and water and killed wildlife, EPA won a \$12 million civil settlement.

"Can you imagine telling Jeff Davis' wife, Mary, their five kids that the fine for the hazards as-

sociated with his death was one-fiftieth of the fine associated with killing fish and crabs?" he said.

Not a wide enough net

The EPA is the only federal agency specifically tasked with protecting the public from chemical accidents and wields the biggest hammer in enforcement. But it traditionally has been focused on preventing and cleaning up environmental damage.

It commits less than 1 percent of its \$8.6 billion budget to chemical safety. About 35 inspectors police more than 12,000 of the most dangerous facilities nationwide under its Risk Management Program.

That program, the agency's chief prevention strategy, requires those facilities to develop emergency response procedures and to consider worst-case scenarios for toxic releases.

Only about 280 facilities in the Houston area are required to file such plans, according to federal data.

And the EPA ignores an entire category of risk.

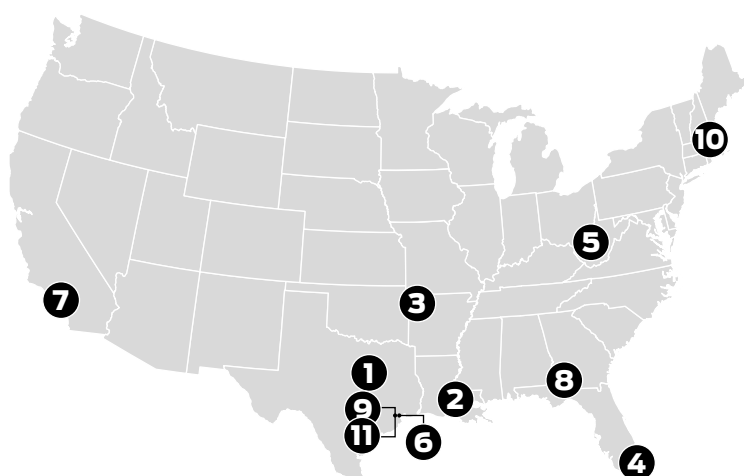
For years, experts have asked the EPA to regulate reactive chemical dangers, which the agency itself — along with OSHA — suggested after a New Jersey disaster in 1997.

In 2002, CSB researchers

Chemical continues on A21

Major chemical incidents over the last three years

After West, President Barack Obama issued an executive order to update chemical safety laws and stop accidents from happening. While that work moves slowly along, casualties continue to rise.



1 West Fertilizer Co.
WEST, TEXAS
APRIL 17, 2013

Fire causes ammonium nitrate to explode, killing 15 people, mostly firefighters.

2 Williams Olefins
GEISMAR, LA.
JUNE 13, 2013

An explosion involving a heat exchanger and loose pipes kills 2 people and injures 114 others.

3 Advanced Environmental Recycling Technologies
SPRINGDALE, ARK.
JULY 17, 2013

A dust flash fire kills a worker and injures two others.

4 American Vinyl Co.
OPA-LOCKA, FLA.
NOV. 7, 2013

A 20,000-gallon tank explodes, killing one worker and injuring five others.

5 Freedom Industries
CHARLESTON, W. VA.
JAN. 9, 2014

A one-inch hole in a tank with the chemical MCHM causes a massive spill. Hundreds of thousands of people are told not to use tap water for weeks.

6 DuPont
LA PORTE, TEXAS
NOV. 15, 2014

A release of methyl mercaptan kills four workers.

7 ExxonMobil
TORRANCE, CALIF.
FEB. 18, 2015

An explosion at a refinery injures two workers. If a tank of hydrofluoric acid had ruptured in the explosion, more than 200,000 people could have been killed from the toxic cloud, the Chemical Safety Board finds.

8 Liquid Transfer Terminals
BAINBRIDGE, GA.
AUG. 19, 2015

A tank explosion of sodium hydrosulfide kills one worker, injures others and forces two dozen homes to evacuate for hours.

9 SunEdison
PASADENA, TEXAS
OCT. 2, 2015

Four workers are burned, one severely, in a silane explosion.

10 Dow Chemical
NORTH ANDOVER, MASS.
JAN. 7, 2016

Five workers are injured when a reaction between trimethylindium and water causes an explosion.

11 PeroxyChem
PASADENA, TEXAS
JAN. 16, 2016

A runaway chemical reaction causes a tanker truck to explode, killing one worker and injuring three others.

CHEMICAL BREAKDOWN



A park in honor of the firefighters who died was built near the scene of the explosion in West. The fertilizer company is no longer in business.

Chemical from page A20

found 167 accidents over a 20-year period that involved uncontrolled chemical reactions, causing 108 deaths and hundreds of millions of dollars in property damage.

But regulations have never been updated to include reactive dangers.

There are other gaps. Fuel retailers are exempt under the RMP. Farmers using ammonia as fertilizer, such as the ammonium nitrate that killed 15 in the West Fertilizer Company explosion three years ago, also are exempt. Hundreds of dangerous chemicals aren't covered.

The EPA has one other tool when it comes to avoiding chemical accidents — the General Duty Clause of the Clean Air Act.

The clause instructs businesses to identify hazards, design and maintain safe facilities, prevent accidental releases, and minimize consequences if a release occurs.

"It's a powerful and broad enforcement tool for EPA," said Jean Flores, an environmental law attorney in Dallas who represents industrial clients.

The EPA typically doesn't use it to prevent accidents, mostly just to punish companies for chemical leaks.

Not enough follow-through

The Chemical Safety Board is to the chemical industry what the National Transportation Safety Board is to airlines, railroads and trucking firms. With fewer than 50 employees and an annual budget of just \$11 million, the CSB has investigated only 16 of at least 340 chemical incidents since 2014.

Investigations are prioritized based on the number of deaths or damage. Even when it does investigate, the CSB has no authority to force change. It only makes recommendations.

In 2006, the board called on OSHA to create an industry stan-

Part 1:
Public goes unaware of chemical threats

Today:
An industry left to police itself

Coming soon:
EPA's fix is already broken



HoustonChronicle.com/chemicalbreakdown

dard for combustible dust after three separate explosions left 14 dead and more injured. After more accidents and deaths, the CSB in 2013 called the dust standard a "Most Wanted Chemical Safety Improvement."

To date, no standard has been set.

In 2010, after a refinery explosion in Washington state, the CSB recommended requiring inherently safer technologies, like substituting equipment or chemicals for less dangerous ones. Water plants, for example, could use liquid chlorine instead of gas, which can spread into neighborhoods.

It hasn't been done.

In Washington, that surprises no one. Since 2002, the CSB has issued 44 recommendations to federal agencies. Just 20 were adopted.

The NTSB's recommendations over 40 years have had a clear impact on public safety. Investigations spurred improved regulations on everything from commercial truck driver training to de-icing aircraft. It helps that aviation and rail incidents require reports to the federal government, and all fatal motor vehicle crashes are reported to the National Highway Traffic Safety Administration.

There is no reporting requirement for chemical incidents.

The CSB relies primarily on media reports to track incidents nationwide, so not even the gov-

ernment has a clear accounting of the injuries, property and lives lost to chemical mishaps.

In all, fewer than 400 federal inspectors — through OSHA, EPA and CSB — provide oversight for the chemical industry, with a combined budget of less than \$50 million a year.

The industry, by comparison, with about 15,000 manufacturing plants, has spent an average of \$191 million annually on lobbying since 1998, according to the Center for Responsive Politics.

Not enough action

One moment three years ago was supposed to redefine everything in chemical safety.

Firefighters rushed to a fire at West Fertilizer. Fourteen minutes later, 12 of them died in a blast that also killed three others and barely missed hundreds of students who had been in nearby classrooms hours earlier.

The perils of ammonium nitrate had not been explained to first-responders in the Central Texas community of West, nor to those who lived blocks away.

The Bureau of Alcohol, Tobacco, Firearms and Explosives recently announced the initial fire was set intentionally by an unknown person. The CSB said the explosion could have been avoided with better regulatory oversight, plant construction, hazardous materials handling, and zoning. The town had grown perilously close to the plant over the years.

Vanessa Allen Sutherland, the board's chairman, in January had harsh words about the state of chemical safety in America, citing "too many violent detonations and runaway reactions" and a "lack of adequate federal, state or local oversight ..."

The board's report on West reads like dozens that have come before — the major themes indistinguishable from one

tragedy to the next. Government failed. Industry failed. Laws didn't work as intended.

President Barack Obama, in West's aftermath, issued Executive Order 13650. It called for an updated law on safety in chemical processing, mostly unchanged since 1992. It ordered federal agencies to figure out how to disclose more information to the public. And it asked them not just to improve emergency response and readiness, to thwart the kind of carnage seen at West, but also to stop accidents from happening.

Peter Boogaard, a Department of Homeland Security spokesman, said recently that the White House remains "committed to preventing similar incidents from occurring at chemical facilities and increasing overall chemical facility safety and security."

The executive order working group — representing EPA, OSHA and others — has blown multiple deadlines and is in danger of leaving its work unfinished before the end of Obama's presidency. OSHA has acknowledged it will take years to update process safety regulations. There is no guarantee the next administration will pick up the mantle.

Agency officials say some progress has been made: EPA is launching a national enforcement initiative in 2017-2019 aimed at chemical safety, but it would start with the same list of 12,000 facilities in its Risk Management Program. More than 400,000 locations are required to file hazardous chemical inventories.

The agency has proposed updates to the RMP. The changes would require additional hazard analysis for some companies, improved emergency preparedness and updated regulatory definitions, among other things. It won't update or expand the list of chemicals.

The EPA says it will put renewed focus on Local Emergency Planning Committees to promote plant safety and improve emergency response.

The working group upgraded software to provide better modeling for chemical releases, took steps to simplify an array of federal databases on chemical facilities, expanded inspector training programs and, with West in mind, focused heavily on emergency planning and response.

Too heavily for Ron White, the former director of regulatory policy at the Center for Effective Government.

He'd like to see more proactive measures.

He suspects it will take the deaths of schoolchildren before the EPA will focus on prevention.

"It will take another disaster," he said.

A patchwork of oversight

Just who is responsible for overseeing the use of — and keeping the public safe from — dangerous chemicals and other industrial threats?

ENVIRONMENTAL PROTECTION AGENCY

"The mission of EPA is to protect human health and the environment."

>> Can take civil or criminal action against a company or people who violate environmental regulations.

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

Created "to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance."

>> Can levy fines against companies that fail to adequately protect workers.

U.S. CHEMICAL SAFETY BOARD

"An independent federal agency charged with investigating industrial chemical accidents."

>> Issues recommendations but has no authority to levy fines or cite companies.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

"Strives to protect our state's public health and natural resources consistent with sustainable economic development."

>> Can issue fines to entities for violating state regulations.

CITY/COUNTY GOVERNMENTS

Local fire departments inspect buildings for code violations. Some cities and counties require permits for businesses using hazardous materials.

>> Can issue fines to companies that violate local regulations.

LOCAL EMERGENCY PLANNING COMMITTEES

Established to meet the requirements of the federal Emergency Planning and Community Right-to-Know Act.

>> LEPCs are required to receive annual chemical inventories from certain facilities in their jurisdictions and to make that information available to the public.

Source: Agency websites
Houston Chronicle



Construction workers walk down North Reagan Street in West as crews continue to repair damage to the road and pipelines.

mark.collette@chron.com
twitter.com/cbronMC
matt.dempsey@chron.com
twitter.com/mizzousundevil