Tank and Petroleum Use Mishaps

By learning about the misfortunes of others, it is STI's hope to educate the public by creating a greater awareness of the hazards with storage and use of petroleum and chemicals. Please refer to the many industry standards and to the fire and building codes for further guidance on the safe operating practices with hazardous liquids. Thanks and credit for content are given to Dangerous Goods-Hazmat Group Network.
http://groups.yahoo.com/group/DangerousGoods/

USA, MA, CHARLTON
SEPTEMBER 8 2014.
EXCEL RECYCLING PAYS DEP FINE FOR CHARLTON FACILITY

Excel Recycling LLC of South Dartmouth has been penalized $15,100 by the Massachusetts Department of Environmental Protection to resolve the company's failure to notify MassDEP and conduct timely cleanup actions for a waste oil spill at its Charlton facility.

On March 6, 2013, during an unrelated inspection, the Charlton Fire Department observed heavy black oil spreading across the company's yard and traced it to several scrap underground storage tanks. The tanks had been brought to the facility to be recycled and should have been empty; however, two of them contained an estimated 150 gallons of waste oil.

MassDEP met with the facility operator and Fire Department and determined that a cleanup was necessary. Upon further investigation, MassDEP determined that Excel Recycling had discovered the spill on March 4, 2013, but did not take action or report it to MassDEP until the Fire Department discovered the release two days later.

MassDEP oversaw cleanup work. Excel Recyclying has revised its facility spill plan, conducted employee training to minimize the potential for accepting contaminated scrap in the future and agreed to the $15,100 penalty.

The company paid $3,250 of the fine to the Commonwealth, $9,750 of the penalty was directed toward purchasing spill response equipment for the Charlton Fire Department as a part of a Supplemental Environmental Project, and the remaining $2,100 has been suspended pending finalization of the SEP and no further environmental violations for a year.

"Timely notification of sudden oil releases enables MassDEP to ensure that cleanup response is started as quickly as possible," said Lee Dillard Adams, director of MassDEP's Central Regional Office in Worcester. "The good work done by the Charlton Fire Department made it possible for this release to be addressed as soon as it was, despite Excel's failure to notify us."

MassDEP is responsible for ensuring clean air and water, safe management and recycling of solid and hazardous wastes, timely cleanup of hazardous waste sites and spills and the preservation of wetlands and coastal resources.
http://www.telegram.com/article/20140907/TOWNNEWS/309079997&TEMPLATE=TOWNPORTAL

Tank and Petroleum Use Mishaps

NEW ZEALAND, LYTTLETON
SEPTEMBER 9 2014.
MOBIL NOT PUNISHED FOR JET FUEL SPILL
Nicole Mathewson

Mobil will not be prosecuted after a landslide caused 1.2 million litres of jet fuel to spill from a tank in Lyttelton.

The landslide happened during a major storm on March 5, damaging two fuel tanks at Mobil Oil New Zealand's tank farm at Naval Point in Lyttelton.

About 1500 litres of fuel went into Lyttelton Harbour through a drainage system before sandbags were put in place.

Environment Canterbury (ECan) announced today that it would not prosecute Mobil over the spill.

Chief executive Bill Bayfield said a prosecution for discharge of contaminants into the harbour had little chance of success, so it was not in the public interest to pursue it.

"A unique series of events came together that stormy day. It was difficult for the company to have predicted or prevented the incident, and under the Resource Management Act it would have had a statutory defence of 'natural disaster'."

Canterbury's earthquakes, the March storm, tunnel gully erosion, the proximity of the tank farm to a steep hill and other factors all contributed to the landslip that triggered the spill, he said.

"Proof of negligence would be required for a successful prosecution. Because there was no such evidence, Environment Canterbury decided not to proceed on this occasion."

Bayfield said ECan had reviewed the decision thoroughly and he was confident the regional council had "reached the right conclusion".

"It is quite plausible that this situation was beyond Mobil's control and is highly unlikely to happen again."

ECan completed a number of environmental assessments since the spill and found no effect on wildlife or any indication of residual contamination on the seabed.

The response cost ECan almost $160,000, but Mobil had since paid back the full amount "so there is no financial cost to the ratepayer", Bayfield said.

Mobil country manager Andrew McNaught said the company responded quickly to the unprecedented event and had fully cooperated with ECan since.

"Mobil's priority at all times was to ensure the safety of our people, responding agencies, the local community and the environment. I am very pleased that no-one was hurt by the landslide or in the subsequent response and clean-up."

Mobil's terminal in Lyttelton had not been in operation since the landslide and all bulk fuel had been removed from the storage tanks.

Mobil spokeswoman Samantha Potts said the company had no intention of putting the Naval Point tanks back into service.

"In fact we're in talks with Lyttelton Port about finding somewhere else for [new] tanks," she said.

The company's own investigation found the landslide resulted from flooding during the severe storm, impacting on the cliff which had already been weakened by earthquake damage.

Recovery of the spilled fuel had been complicated by heavy rainfall and debris on the site, and 1500 litres of fuel was able to escape into the harbour through drainage holes in an access ramp.

McNaught said the fuel should not have been able to leak through the drainage points and the investigation had identified issues in the construction of the ramp itself.

http://www.stuff.co.nz/the-press/10473344/Mobil-not-punished-for-jet-fuel-spill

Tank and Petroleum Use Mishaps

USA, CA, LOS ANGELES
SEPTEMBER 12 2014.
FRACKING WORKERS EXPOSED TO DANGEROUS AMOUNTS OF BENZENE, STUDY SAYS

Some workers at oil and gas sites where fracking occurs are routinely exposed to high levels of benzene, a colorless gas that can cause cancer, according to a study by the National Institute for Occupational Safety and Health.

The agency, which is part of the Centers for Disease Control and Prevention, recommends that people limit their benzene exposure to an average of 0.1 of a part per million during their shift. But when NIOSH researchers measured the amount of airborne benzene that oil and gas workers were exposed to when they opened hatches atop tanks at well sites, 15 out of 17 samples were over that amount.

Workers must open these hatches to inspect the contents of these tanks, which could include oil, waste water or chemicals used in high-volume hydraulic fracturing, or fracking. The real-time readings taken by researchers show that benzene levels at the wells "reached concentrations that, depending on the length of exposure, potentially pose health risks for workers," the researchers reported in the Journal of Occupational and Environmental Hygiene.

The study examined exposure risks for oil and gas workers during a phase of oil and gas extraction known as flowback. After a well is drilled in a tight geological formation such as shale and then hydraulically fractured to encourage the flow of hydrocarbons, fluids return up the well bore over the course of a month. The flowback contains fracking fluid, waste water, sand, oil and gas dissolved in water. The liquids are separated into constituent substances, including valuable fracking chemicals that can be reused, oil and gas that are stored in production tanks, and waste fluids that are held in flowback tanks.

Workers measure the volume of liquids in flowback and production tanks by opening top hatches and inserting so-called gauging sticks into flowback tanks. If the tanks are very deep, workers use hand-cranked gauging tapes to make their measurements.

Researchers visited six oil and gas sites in Colorado and Wyoming in the spring and summer of 2013, spending about two days at each site. They outfitted 16 workers at flowback tanks with small devices attached to their shirt collars that sampled the air throughout the day. The key measurements were taken when these workers were standing above the hatch.

Over the course of a 12-hour shift, workers open the hatches and stand above them one to four times per hour, breathing in the fumes for two to five minutes each time. This could add up to dangerous levels of exposure to various volatile organic compounds from the chemicals used in fracking, or from the hydrocarbons themselves.

Benzene, a component of crude oil, "is of major concern because it can be acutely toxic to the nervous system, liver, and kidneys at high concentrations," the study authors wrote. As the CDC explains, benzene interferes with the normal workings of cells.

"It can cause bone marrow not to produce enough red blood cells, which can lead to anemia," according to the CDC. "Also, it can damage the immune system by changing blood levels of antibodies and causing the loss of white blood cells."

Although all but two of the samples recorded average daily benzene exposure above the NIOSH limit, the amounts were still below the far higher limit of 1 part per million set by the federal Occupational Safety and Health Administration.

The OSHA limit is "the only legally applicable limit," said John Snawder, a NIOSH toxicologist who worked on the study. OSHA limits often tend to be higher than NIOSH standards, in part because of input from industry and other stakeholders.

About 562,000 people worked in the domestic oil and gas extraction sector in 2012, and nearly half of them worked for companies that perform fracking and flowback operations, the study said.

Little is known about the long-term effects of benzene exposure on oil and gas workers, said Dr. Robert Harrison, director of Occupational Health Services at UC San Francisco. "With the rapid expansion of

oil and gas production in the U.S.," the risks posed by benzene are ones "that we would want to pay attention to," he said.

NIOSH's research on benzene is part of an ongoing project that it launched in 2005 to assess the scope and variety of chemical exposure risks for oil and gas workers at the extraction phase of industry. Much of the research on oil and gas development's effects on worker health is from the 1980s and 1990s and doesn't take into account new risks that workers might face amid an energy boom spreading through the country, driven by fracking.

"Industry has changed and is changing very rapidly," Snawder said. "This is an updated base line of where we stand at this moment."

The benzene study follows research NIOSH issued in 2012 indicating that workers were exposed to crystalline silica from sand used at fracking sites. Exposure to crystalline silica can lead to a deadly lung disease called silicosis, lung cancer and other respiratory ailments. OSHA is in the process of finalizing a new silica rule after years of delay, but its tougher standards are being fought by a range of industries.

Katie Brown, a spokeswoman with the trade group Energy In Depth, said that the oil and gas industry was committed to worker safety and had worked with NIOSH to allow them on well pads to test workers' exposure risks.

The oil and gas sector also has fewer injuries than other industries, she said. "The number of nonfatal injuries and illnesses in the oil and gas industry has significantly declined while production has ramped up to unprecedented levels," Brown said.

The oil and gas industry, however, has a fatality rate "of 27.5 per 100,000 workers (2003-2009) – more than seven times higher than the rate for all U.S. workers," according to NIOSH. Most fatalities are the result of accidents.

"At least four workers have died since 2010 from what appears to be acute chemical exposures during flowback operations at well sites in the Williston Basin (North Dakota and Montana)," NIOSH reported on its blog.

The NIOSH scientists cautioned that the results of their new study were "preliminary," given the small number of workers involved. But despite the limitations, they recommended comprehensive measures to address exposure to benzene, including the development of alternative tank gauging procedures to limit exposure and outfitting workers with respirators.

The breadth of the recommendations indicate how serious NIOSH believes the benzene threat to be, said Miriam Rotkin-Ellman, a health scientist with the Natural Resources Defense Council, which has spotlighted the enviornmental effects of fracking but is not opposed it altogether.

"Their recommendations are pretty pointed," Rotkin-Ellman said. "They aren't saying we need to study this issue at 15 more places before making these recommendations. These measures are warranted based on these investigations. You read their recommendations, and they say, 'Get these people out of the way of benzene.'"

http://www.latimes.com/science/sciencenow/la-sci-sn-fracking-benzene-worker-health-20140910-story.html#page=1

USA, PA, PITTSBURGH
SEPTEMBER 12 2014.
DEP RELEASES UPDATED DETAILS ON WATER CONTAMINATION NEAR DRILLING SITES
SOME 240 PRIVATE SUPPLIES DAMAGED BY DRILLING IN PAST 7 YEARS
Laura Legere

Pennsylvania regulators found an array of contaminants in the roughly 240 private water supplies they said were damaged by oil and gas operations during the past seven years.

Most were the usual culprits: methane, metals and salt that had apparently seeped from well sites or been stirred up by the activity of extracting fossil fuels from the earth.

But on May 14, after the Department of Environmental Protection responded to a Susquehanna

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County resident's complaint of rank, foamy water, inspectors said they found something else. The water contained volatile organic compounds, ethylene glycol and 2-butoxyethanol — chemicals regulators said were consistent with the surfactant Air Foam that was used to drill a natural gas well 1,500 feet away.

That discovery is contained in records DEP released on Aug. 28, when the department posted for the first time an official tally and supporting documents of water supplies that were damaged by oil and gas activities since the end of 2007. It is the only case where DEP explicitly linked a drilling operation to the presence of industrial chemicals in drinking water.

DEP spokeswoman Colleen Connolly said the chemicals were introduced to the groundwater during the drilling process, not hydraulic fracturing, or fracking — the method of freeing oil or gas from deep rock by cracking it with a high-pressure injection of water, sand and chemicals.

The most recent sampling event did not detect the chemicals in the water, she said, and the company presumed responsible for the contamination, Chief Oil and Gas, is providing the home with a temporary replacement water supply.

A Chief spokeswoman said the company "worked closely and immediately with the landowner and DEP to investigate the cause of the temporary impact to the individual water well and to resolve it in a timely manner."

But the state and the company do not yet know how the drilling chemicals got into the aquifer that feeds the residential water well.

"That's what we're trying to determine," Ms. Connolly said.

Details released

DEP's list of water supply impacts reveals interesting if inconsistent details about the types of disruptions that have affected homes, businesses, a church camp, even an orchard with 15 goats, as well as how long those problems last and who is blamed.

Regulators are required by law to determine within 45 days of getting a drilling-related water complaint if oil and gas operations caused contamination or diminished the flow of water. DEP reports its findings in letters to property owners. On some occasions, it also issues orders to companies to fix the damage when the agency determines — or presumes, based on proximity — that a company was responsible for causing the problems.

According to a Pittsburgh Post-Gazette analysis of the letters and enforcement orders detailing the 243 incidents, oil and gas activities degraded water quality in 234 of the cases, either by introducing compounds that weren't there before or by raising them above standards set for reasons of health, safety, taste or appearance. Sixteen water supplies diminished in flow or went dry because of nearby drilling activities, and seven of the water supplies were affected by both pollution and diminution.

Fewer than 200 of the letters and orders identify which compounds were found in the water above drinking water standards or the background levels measured in the water supply before drilling began.

The drilling chemicals found this year in the Susquehanna County water well may be the most alarming contaminants on the list, but by far, the most common pollutant is methane, which was reported in 115 of the damaged water supplies. As DEP describes in the letters, methane can be hazardous when it escapes from water and concentrates in confined spaces, creating a danger of fire or explosion.

After methane, the most commonly elevated compounds are iron (79 water supplies) and manganese (76 water supplies), followed by two markers of salinity: total dissolved solids (29) and chlorides (25).

DEP says many of the complaints have been resolved and the list does not necessarily reflect ongoing impacts. Records for 86 of the incidents specify when the water supply was restored, either on its own or through a remedy provided by a drilling company. Many other letters report steps that operators will or have taken — installing treatment systems, drilling new water wells, paying settlements, patching leaking gas wells. The letters describe 44 of the disturbances as temporary.

Only three-quarters of the letters and orders name a company in connection with a disruption, but 47 different oil and gas well operators are represented on the list. Chesapeake Energy is named in the most

letters and orders (25), followed by Cabot Oil and Gas (23), Catalyst Energy (17), Schreiner Oil and Gas (14) and U.S. Energy Development Corp. (12).

Nearly 40 of the letters and orders note that oil and gas operations are presumed — not proven — liable for the problems based on the distance from a water well and the time of the impact.

Few of the documents describe what exactly went wrong, but some provide a glimpse of recurring problems: Methane channels through flawed well bores and abandoned wells or is displaced from shallow pockets during drilling to sputter out of faucets, infiltrate basements and bubble up in streams. Sediment from road, pipeline and pit construction clogs spring boxes. The briny fluids and rock waste that are a byproduct of oil and gas extraction seep into shallow water sources from spills, breached pits or other pathways left undefined.

Number of well impacts fell

A spokesman for the Marcellus Shale Coalition, an industry trade group, identified other trends, including a decrease in the number of water well impacts between 2010 and 2014.

"We believe this is attributable to the collaboration between state regulators and the industry to strengthen the regulations that govern oil and natural gas development, including well construction and cementing standards," spokesman Patrick Creighton said.

More Pennsylvanians rely on private water wells than residents of all but one other state, but the water wells are largely unregulated, and they often fail at least one drinking water standard. All of the most commonly elevated compounds DEP associated with drilling-related disruptions are also frequently present in Pennsylvania groundwater under natural conditions.

Given the number of private water wells — more than 1 million — and the number of conventional and shale oil and gas wells drilled during the time frame covered by DEP's list — 20,000 — "the percentage of water wells impacted is statistically very low," Mr. Creighton said.

"First and foremost, as an industry (both conventional and unconventional), we're working towards zero events and continually refine and improve practices to achieve that goal," he said.

Some lasting effects

For property owners, the effect of a water supply disruption can linger years past the date when DEP approves a plan to fix it.

David Buck, who runs Endless Mountain Outfitters along the Susquehanna River in Bradford County, saw the naturally present methane in water wells at two of his rental properties increased after gas wells were drilled nearby. DEP eventually listed his wells among 17 water supplies tainted with methane that Chesapeake Energy was responsible to restore under the terms of a 2011 enforcement agreement that carried a record fine.

The company installed and maintains complex treatment systems on the properties, he said, and the methane levels, though still elevated, have decreased.

But he can't say he's completely satisfied with the solution.

The properties are for sale and the treatment systems — which, he estimated, cover a 6-by-4-foot area — "are not just like a little filter down in the basement."

"I'm just trying to figure out what the loss in value of a property is that's got a water treatment system on it," he said. "That effect? I have no idea."

List to be revised

The number of affected water supplies has shifted and it will shift again.

In July, DEP gave an early version of its official list to the Pittsburgh Post-Gazette with 209 entries. By the time it posted its list to its website on Aug. 28, DEP had added 34 cases to reflect new determinations it had made and old determinations that had been overlooked during its first search of its files.

DEP now plans to revise the list to remove five duplicate entries related to a 2010 gas migration case in McKean County, spokeswoman Morgan Wagner said.

It also plans to keep the list updated with new water supply impacts as they are confirmed and add further detail to the list by designating which cases are related to unconventional, shale gas operations

versus traditional, conventional operations.

"This interactive spreadsheet represents the first statewide effort to create a dynamic, comprehensive list of all private water supply impacts from oil and gas activities," Ms. Wagner said. "While the department is confident in the thoroughness of its review, efforts will continue in our regional offices to ensure the information is accurate and up-to-date."

What the list doesn't include, except on rare occasions, are records of private agreements reached between drilling companies and landowners to resolve water complaints, even when DEP is aware of them.

Three cases on the list, in Washington County last year and Bradford County in February, describe a damage release agreement and a waiver of additional water tests that residents signed with gas well operators after DEP opened its investigations.

DEP officials have acknowledged that the agency doesn't typically issue violation notices or determination letters or assess fines when water contamination complaints are privately settled.

That practice was sharply criticized in a special audit of the oil and gas program released by the Auditor General in July, which said it gives the impression, whether real or not, that companies can "make a deal" and avoid a blemish on their record. It also risks undercounting the actual incidence of harm.

In an interview, Auditor General Eugene DePasquale said that without records of those private settlements, "it's not an accurate total, and it's certainly not open and transparent."

Ms. Wagner said the department is currently revising its compliance and enforcement policy to address privately reached agreements. The policy is expected to be published for public comment soon.

The department is also creating a standard template across regional offices to establish required information and improve consistency in its determination letters and records, she said.

Mr. DePasquale commended DEP for making those improvements and for releasing the information, but he questioned the completeness of the list.

His audit studied 15 instances when DEP made water supply impact determinations, but his office found only eight of those cases on the list posted on DEP's website.

He said the changing totals reveal the depth of the record-keeping problems he identified in the audit.

"A month ago it was 209. Today it's 243," he said. "That, to me, is very clear that DEP has a lot of work to do to get full and accurate information."

http://powersource.post-gazette.com/powersource/policy-powersource/2014/09/30/State-organization-to-study-impact-of-wind-farms-in-Pennsylvania/stories/201409300021

CANADA, AB, ST ALBERT
SEPTEMBER 14 2014.
OVERFILLED TANK CAUSES DIESEL SPILL AT CITADEL CARE CENTRE
LOW RISK TO ENVIRONMENT, CITY

Amy Crofts

Human error was the cause of a diesel spill in the basement of Citadel Care Centre on Thursday.

Firefighters were called out to 25 Erin Ridge Road around 2 p.m. on Sept. 11 to contain an estimated 200 to 300 litres of diesel fuel.

A new contractor was filling the building's back up generator with diesel and might not have been familiar with the system, said Mike Boss, fire investigator with the City of St. Albert.

"There is a safeguard in place, but … the operator made an error when filling and overfilled substantially. A fair amount did go down into the sanitary sewer."

The generator's tank can hold up to 1,200 litres.

Firefighters mopped up as much as they could and contained the spill using Hazmat absorbent socks and pillows. The ventilation system was also re-directed so the odour would not permeate the rest of the building, explained Boss.

The building was deemed safe enough so that no Citadel residents or staff were evacuated.

Public works and personnel from the city's office of environment were also called in.

Staff went to the closest inspection manhole for the sanitary line and observed an oily sheen over the water, said Jeff Yanew, environmental co-ordinator with the city.

It is difficult to know how much fuel flowed into the sanitary collection system, he said.

Staff immediately put out a hydrocarbon absorbent boom in the channel to catch any residual diesel. Petroleum hydrocarbons products such as diesel float on top of water and can be skimmed off.

Overall, risk to the environment is low, said Yanew. The sanitary sewer system is a "closed loop system" that delivers water straight to the Alberta and Capital Regional Wastewater Commission Plant.

"It (won't) leach out and effect soil, ground water or storm water," he explained.

"From the environment standpoint, we're pretty lucky that it did go into the sanitary system. It going into the sanitary system is a lot better than it going into the storm system, which goes right to the river."

The spill was reported to Alberta Environment and city staff will continue to monitor the inspection manhole outside Citadel, said Yanew.

The owner or party responsible will be billed for the cost of clean-up materials and fire services response, added Boss.

http://www.stalbertgazette.com/article/20140913/SAG0801/309139986

TRINIDAD & TOBAGO
SEPTEMBER 15 2014.
PETROTRIN IGNORED OIL TANK WARNINGS ...$70 MILLION IN OIL SPILL COSTS
Camini Marajh Head

Contrary to claims made by the company's top brass about a 2010 inspection checklist slipping through the cracks, state oil giant Petrotrin had knowledge that its slop oil storage tank MP6 had corrosion and integrity issues and did nothing about it, Sunday Express investigations have found.

Repeated warnings about MP6's perforated roof and corrosion problems went unheeded for 19 months as several departments and layers of technical and management personnel at the State-owned-and-managed refinery failed to respond to identified MP6 work orders logged into the company's computerised maintenance system - SAP.

Systems-wide checks and balances, including daily-structured operator rounds and a package of Shell-bought Risk Based Inspection (RBI) tools to prevent what happened from happening were also ignored. Continuing Sunday Express investigations into the company found that serious maintenance problems were overlooked and that managers failed to follow the proper protocols that would have prevented the July 29 accident.

MP6 leak Overlooked

The company which is yet to come clean about how an under-maintained storage slop tank kept in continuous service was allowed to deteriorate without intervention and spill its brew of deadly contaminants into the environment, acknowledged partial blame for an accident it admitted: "should not have happened".

Top executive Khalid Hassanali and company chairman, Lindsay Gillette conceded at an August 3 news conference that the Inspection Department was in receipt of a May 2010 report which flagged a minor tank leak on MP6 but claimed that the problem was overlooked because the information was not entered into Petrotrin's computerised maintenance system.

There was nothing from the company's top brass about how or why key departments and plant personnel failed to maintain or monitor Tank MP 6 or why two scheduled inspections recommended 23 years ago when the tank was in a non-corrosive service were skipped. What the company leadership offered instead was an excuse that the company was in the dark about the problems raised in the 2010 inspection report because it was sat on by the Inspection Department.

"The information is supposed to be entered into our computerised maintenance system and action

taken. There was no entry into our computerised system," said Hassanali, declaring, "that is most unfortunate".

What Hassanali and his chairman omitted to tell the country was that computer generated work orders relating to holes on MP6's roof and other tank integrity issues had been mouldering in the company's SAP system since December 2012.

Seeking Cover

The company's top officials, who have come under increasing scrutiny in the wake of Petrotrin's latest industrial disaster, took cover behind its ongoing investigation into the tank failure to avoid questions about its failed risk assessment process and poor safety and operating procedures.

"These matters are being investigated by the independent auditor. We are unable to comment as you would appreciate that to do so may compromise the ongoing investigation," was the stock response to a list of Sunday Express submitted questions.

Petrotrin which has repeatedly been caught lying about the December oil spill by a series of investigative articles published over a three-month period in this newspaper, returned to its old pattern of behaviour and lied again to the national community when it said it did not know that Tank MP6 was in distress.

Its own documents and company information paint a very different story. Documents obtained by the Sunday Express show that computer generated work orders for slop oil tanks MP5 and MP6 were entered into the company's maintenance database in December 2012 for action but as with sealine No10 and other at-risk refinery assets which failed dramatically over the last year, Petrotrin failed to follow its own integrity management plan.

Multiple Warnings

The December 2012 work order which was repeated in Petrotrin's SAP system carried the header "corrective maintenance" and clearly identified the need to, "carry out repairs to the roofs of MP5 and MP6 and ensure there is adequate overpressure protection to receive flare condensate ex ULSD (Ultra Low Sulphur Diesel)" or a pressure safety valve for what is an atmospheric tank.

The work order to "repair leaks on roof" of Tank MP6 was repeated again in Petrotrin's SAP system last October. The company overlooked the multiple warnings including its own 1991 inspection recommendations for an external for MP6 in March of 1992 and an ultrasonic in March 1996. The company also switched service from lube oil to the more corrosive service of oil slops without a "fitness for service" test or the standard Management of Change (MOC) review in 2000.

How or why the company has repeatedly ignored its own refinery safety standards or taken measures to address serious integrity issues flagged for attention in the aftermath of the catastrophic December spill is unclear. The Petrotrin response to most questions was the standard: "We are unable to provide a conclusive statement with respect to the query as the matter is presently being investigated."

But business as usual

And as this Sunday Express investigation has found, the underlying thread throughout the Petrotrin narrative is to proceed with business as usual. The company proffered the standard "unable to respond comment" to key questions about why it outsourced a flurry of inspection work to South-based firm InCorrTech Ltd, who was minding the store tracking data in the Inspection Department, why the circle of persons associated with the May 2010 inspections failed to do any follow up on the findings of the InCorrTech report, why were scheduled inspections skipped and how was it possible that MP6 could continue to leak slop oil without notice for four years before it eventually ruptured?

The man who signed off on the InCorrTech two dozen visual tank inspections conducted over five days in May 2010, Ian Haynes, Petrotrin's then Supervisor of Inspectors (SOI), said 2010 was a long time ago.

Reached for comment on what happened to the MP6 inspection checklist or why there was no follow-up to what was described as a "minor leak, settlement of the tank on the eastern side and a bulge",

Haynes said: “It’s been a couple of years since I left the company, I would have to get back to you.”

Nobody minding the store

In a later response to a text message, Haynes said he had no comment to make on the matter. Ronald Grant, the then acting Head of Inspection, said he had no knowledge of the 24 inspections and/or their findings. According to him, nothing relating to those inspections crossed his desk. And while the company was quick to rule out safety lapses at the refinery, the growing pile of evidence relating to equipment failure, delayed plant turnarounds, unscheduled plant shutdowns, declining revenues, near zero profit margins and systems-wide failure suggests otherwise.

On the question of whether the company has a policy for keeping equipment with known mechanical defects in temporary service pending repairs, Petrotrin’s leadership said: “The company would not knowingly allow critically damaged equipment with the potential to cause emergency events to be in operation. The company has implemented proactive measures including its preventive maintenance programme to manage aging and damaged equipment.”

The evidence on record suggests differently.

Petrotrin had known that its sealine No 10 had serious mechanical integrity issues, it knew that its 2000-converted slop tank MP6 had a leaky roof; it knew that the tank contained a witch’s brew of toxic chemicals; it knew that the levels of spilled hydrocarbons were harmful to human health yet failed to tell hundreds of residents in neighbouring communities that their air had been poisoned even as they were falling ill with respiratory-related problems, it knew that the rupture of tank MP6 took place before the 12.45 p.m. start time it said the incident happened and it knew that it was 19,512 barrels of toxic waste that spilled into the environment and not 17,844 as it reported.

$70 million and counting

The energy giant which took a near $60 million hit in the pocket on the sealine No 10 accident has already spent over $10 million on the MP6 spill, according to Petrotrin insiders, who disclosed that all of the company’s fail-safe measures, including a poorly-designed and built bund wall and three Guard Basin-installed pumps that were all simultaneously down - all failed.

As reported in last Sunday’s Express, the company’s emergency response was slow on several counts including its internal emergency alarm system which it failed to activate and the setting up of emergency shelters for residents impacted by the spill. Senior plant personnel and Petrotrin’s fire services were not immediately notified, according to sources. The failure of Tank MP6 originated at the bottom eastern side of the tank, the same place identified as having a leak in the InCorrTech inspection report four year ago.

Slow response

And contrary to company claims that all emergency responders and workers were equipped with the appropriate respiratory masks, Petrotrin workers, who spoke on condition of anonymity, said that was not the case. They disputed Petrotrin’s account of events which was reported in last Sunday’s Express.

Persons with knowledge of the situation say initial attempts to dam the fallen bund area and surrounding drains were unsuccessful. The company’s top brass has refused to take ownership of Petrotrin’s spills, near misses and maintenance problems and has held up the tired defence of aged assets nearing the end of life and worker negligence but it is aged infrastructure that the company knows about and has kept in continuous operation without the requisite safety checks and service.

Workers’ union representative Ancel Roget questioned why there was a 19-year gap between inspections for Tank MP6 and what was the health and condition of the Pointe-a-Pierre refinery. He said it was “troubling” that the least critical assets have failed.

New man in town

The company has recently hired British national Jonathan Barden as its new refinery manager.

Barden, who was previously with Petroplus BP in Australia, is currently acting vice president, Refining and Marketing.

The incumbent VP, Mado Bachan, as one of the casualties, suspended pending an audit by

PricewaterhouseCoopers refinery expert, Von Gusa from PWC's Texas office.

Petrotrin has held up its ongoing PWC audit as an independent investigation into the July 29 incident but the consultant is Petrotrin-hired and his terms of reference are Petrotrin-issued.

It is a Petrotrin-paid-for brief.

Side effects of exposure

Persons exposed to high concentrations of Volatile Organic Compounds (VOCs) including benzene can develop chronic illnesses, including cancer, respiratory-related problems and allergies. Slop oil contains a mix of VOCs, some of which are known carcinogens as well as being toxic to the liver, kidney and immune systems.

http://www.trinidadexpress.com/news/Petrotrin-ignored-oil-tank-warnings-275030631.html

USA, N.D, BISMARK
SEPTEMBER 17 2014.
NORTH DAKOTA ENERGY WORKERS CONTAIN OIL, WATER SPILL

The North Dakota Oil and Gas Division says workers have contained 500 barrels of water and three barrels of oil after a spill in the state's northwest corner. The division said 20 barrels of water and one barrel of oil hadn't been recovered Monday at the Oasis Petroleum site about 11 miles northeast of White Earth. The water is used in hydraulic fracturing, a method of extracting oil and gas. The spill is believed to be the result of a tank overflow. The division didn't report any environmental damage. It says a state inspector is traveling to the site and will monitor the rest of the cleanup.

http://bismarcktribune.com/bakken/north-dakota-energy-workers-contain-oil-water-spill/article_a2eed722-3da6-11e4-8ce6- 1bcbdec0557e.html

USA, TX, BAYTOWN
SEPTEMBER 18 2014.
LIGHTNING STRIKES OIL TANK, CAUSING BIG EXPLOSION

Wednesday's storms are being blamed for a fire and explosion in Baytown.

It happened around 1pm. According to the Baytown Fire Department, one oil tank was struck, caught fire and exploded. A second tank then fire, as well. Both are operated by Linc Energy

No injuries were reported and at this point, there's no evidence of pollution in the bay.

"The only thing that can cause us a problem now until we get a vacuum truck down there is if this rain storm dumps a lot of water on us really fast, we might have to do additional diking to keep it out of the bay," said Tim Rogers with the Baytown Fire Department.

Business 146 and a portion of Lee Drive were closed during the fire, however they have reopened. Evergreen road remains closed for the time being.

The fire was out by 1:45pm.

http://abc13.com/news/baytown-fd-lightning-strikes-oil-tank-causing-big-explosion/312773/

CANADA, AB, EDMONTON
SEPTEMBER 18 2014.
MORE THAN 1,000 LITRES OF DIESEL FUEL SPILLS FROM SOUTH-SIDE INDUSTRIAL COMPANY
Andrea Sands

An estimated 1,000 to 1,500 litres of diesel fuel overflowed Wednesday morning from a 20,000-litre tank at Wajax Power Systems, prompting authorities to shut down power and evacuate the complex, said a spokeswoman for Edmonton Fire Rescue.

Firefighters were called to the hazardous materials spill around 9:30 a.m. Wednesday, at 10025 51 Ave., said Laura Ruddock. Staff at Wajax Power Systems discovered the spill when they arrived to work Wednesday morning and evacuated the building and shut down power, she said.

"Staff explained that a night-shift employee was filling up a holding tank with diesel and forgot to

turn the valve off before he left," Ruddock said. "The tank overflowed and ran into their drainage system and then into the sewer."

Wajax Power Systems serves customers in oil and gas and other industries and works in power systems, diesel engines, transmissions, generators and parts and service, according to the company website.

Firefighters sent nine trucks and a jet boat to work with city drainage crews and Alberta Environment to contain the spill.

"There was some concern that the fuel could run into the river," Ruddock said.

"Luckily, drainage services was able to confirm that the leak did not reach the river and it was contained to the sewer system."

The contaminated water is expected to run through the sewer to the Gold Bar Water Treatment Plant where it will be cleaned, Ruddock said.

http://www.edmontonjournal.com/More+than+litres+diesel+fuel+spills+from+south+side+industrial+company/10211363/story.html

USA, PA, PITTSBURGH
SEPTEMBER 20 2014.
RANGE RESOURCES TO PAY $4.15M PENALTY
Don Hopey

Range Resources will pay a $4.15 million penalty to settle violations related to six Marcellus Shale gas drilling and fracking wastewater impoundments in Washington County that contaminated soil and groundwater, state officials said.

It's the largest fine ever imposed against a Marcellus Shale gas drilling company, according to the state Department of Environmental Protection.

The consent order will result in the closing of five of the football-field-sized impoundments and require Range Resources to upgrade its operations at two others to meet more stringent, but as yet to be adopted, state standards.

DEP Secretary E. Christopher Abruzzo said the consent order "reaffirms the administration's unwavering commitment to protecting Pennsylvania's soil and water resources," and establishes higher standards for construction of new impoundments.

Range Resources spokesman Matt Pitzarella did not return phone calls seeking comment but referred inquiries to a statement posted on the company's website that said contamination was limited to "elevated levels of chlorides, or salt, at some older facilities," and had no impact on an private water wells. State Rep. Jesse White, D-Cecil, said the problems at the drilling reservoirs, each capable of holding 13 million to-15 million gallons of wastewater, have been well known for a long time and DEP enforcement was long overdue.

"This action is about looking good, not doing good," Mr. White said. "The DEP will try to spin this but the $4 million is just the price of doing business for Range."

Mr. White said the state should ban all new shale drilling wastewater impoundments because they are not considered an industry best practice and most drilling companies have stopped using them.

The DEP news release said the violations include releases of "flowback water" from wells where hydraulic fracturing, also known as "fracking," occurred. DEP officials also said there has been no impact on local private drinking water supplies, a claim that anti-drilling activists question and that is the subject of several ongoing legal actions.

The consent order requires Range to immediately begin closing the Hopewell Township 11 impoundment known as the Lowry impoundment; the Cecil Township 23 , known as Worstell; and the Kearns impoundment, also in Cecil.

Range also will continue its ongoing closure of the Yeager impoundment in Amwell, and must close the Bednarski impoundment in Hopewell by April 2015.

The consent order said Range violated state permit requirements by failing to submit building plans to the DEP for six of the impoundments, and failed to contain spills of recycled water and fracking fluids at six impoundments.

At the Kearns impoundment, the order said Range failed to control fracking fluid from flowing from a pipe, onto the ground and into a tributary of Brush Run, a state-designated High Quality stream, resulting in harm to aquatic life.

Also at Kearns, in October 2011, the company failed to contain approximately 400 barrels of used fracking fluids, which was released into the ground and a nearby stream, Dunkle Run.

At the Yeager impoundment, Range failed to contain fracking and other fluids in February 2013 and in April and May 2014.

John Poister, a DEP spokesman in the southwest district office in Pittsburgh, said the consent order "makes it plain that we were seeing a pattern and we were concerned."

He said the shale drilling industry has built 25 centralized impoundments to hold fresh and flowback water, and most of the problems are occurring at older reservoirs that don't have double liners or sophisticated leak detection systems.

Although he agreed that many drilling companies have stopped using storage impoundments in favor of above-ground tank systems, he said the state is working with Range and other companies to make the impoundments work better.

"We want to see if it can be done safely and if the new standards can work," Mr. Poister said. "If we see they don't work, we'll make changes."

The order requires Range to upgrade the liner systems and leak detection mechanisms at two impoundments, one in Chartiers and the other Amwell.

The DEP is also requiring Range to "investigate and remediate any groundwater contamination caused by the previous operation of the impoundments."

Under terms of the consent order, Range must immediately begin soil and groundwater investigations at each of the closed impoundments to determine what environmental impact they had on soil and groundwater.

"If contamination is found, the company is required to remediate the sites," the release said.

Range's penalty is the largest assessed by the DEP against a shale gas drilling company. Previously, the DEP fined Chesapeake Energy $1 million for a February 2011 Washington County tank fire and for a spill of hundreds of thousands of gallons of fracking fluid that contaminated several drinking water wells in Bradford County.

http://www.post-gazette.com/local/2014/09/18/DEP-orders-Range-Resources-to-pay-4-million-fine/stories/201409180293

USA, N.M, SANDOVAL CO
SEPTEMBER 21 2014.
OIL TANK FIRE CONTAINED IN SANDOVAL COUNTY
Elizabeth Reed

Four Corners firefighters contained an oil tank fire burning on U.S. 550 in rural Sandoval County around 12 p.m., according to WPX Energy. The fire started around 10:20 a.m. and involved three tanks containing water and a "small quantity of oil," a WPX Energy spokesperson wrote in an email. The three oil wells at the location were shut in immediately as emergency responders worked to extinguish the fire. WPX Energy says there were no injuries during the incident. The cause of the fire is under investigation.

http://www.kob.com/article/stories/S3566617.shtml?cat=500#.VB4qXsanrww