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RÉPUBLIQUE FRANÇAISE
Ministère de l'Écologie, du Développement durable et de l'Énergie

NEWS ARIA FLASH October 2015

Malicious acts: Raising awareness to improve prevention

DREAL

Due to the goods and products they handle or the nuisances they create, industrial sites have long been the preferred targets for those with malicious intent: 4% of accidents occurring in classified facilities involve malicious intent.
In light of this safety threat and given the often significant economic consequences from such aggressions, site operators must exhibit greater vigilance and draw lessons from past events. Malicious intent no longer lies in the realm of imponderable!

A malicious acte is often the symptom of a "gratuitous violence" driven by the sheer desire to cause damage. Depending on its specialisation however, each industrial installation also attracts wrongdoers with very unique motives. Here's a brief overview of the most common cases:

- Objective: **Expressing dissatisfaction in the context of a facility's difficult local acceptance**
  Typical scenario: Deliberate spilling of polluting substances or arson committed by residents neighbouring an installation.

  22nd July 2001, TURNY (ARIA 20814)
  In a sawmill, a supply line from an electric generating set is punctured at the outlet of a fuel oil tank. The 3,000 litres of fuel oil contained in the cistern spread across the site and into a neighbouring ditch. The site operator sprinkled sawdust to absorb the product. Fire-fighters set up a straw dam in order to prevent the fuel oil from reaching a watercourse. Several other malicious acts had been committed during the previous month. Tense relations with neighbours were the cause of this outbreak. The operator wound up moving the activity to another site.

- Objective: **Stealing materials or objects with resale value**
  Typical scenario: Thefts of: automobile parts from a scrapyard, petrol from a filling station, chemical substances offering desired properties (e.g. explosives) from a chemical plant.

  22nd Dec. 2005, HEUDEBOUVILLE (ARIA 31218)
  An armed band of 2 men and 1 woman stole 1,280 kg of aluminium powder from a plant producing metal inks for packaging after neutralising the company security guard. The police undertook an investigation.

Key figures on accidents stemming from malicious acts

- Cited in 4% of accidents occurring at classified facilities in France since 1992.
- 77% of cases involving fire, 49% involving discharge of hazardous or polluting substances (smoke from fire or deliberate environmental pollution).
- Major consequences: internal economic losses in 84% of cases, environmental pollution in 46% of cases.
- The primary targets:

1. Wholesalers, retailers and merchandise warehouses: 25%
2. Waste collection and treatment facilities: 22%
3. Manufacturing-transformation installations (chemical products, metalwork / woodwork, food processing): 16%

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Burglaries often end in:

- a fire: Intruders set fire after committing the theft to remove evidence of their infraction;
- an environmental pollution (spilling of Pyralene following theft of a transformer; flow of hydrocarbons from a tank whose valves had been opened to siphon contents).

- Objective: **Getting rid of cumbersome or hazardous objects/products**

  Typical scenario: Illegal dumping of detonators, military shells, chemical or toxic products, etc. at a disposal site, leading to pollution, explosion or fire.

  22nd SEPTEMBER 2010, NICE (ARIA 39004)
  When using a power shovel, a dumpsite employee triggered the explosion of a detonator
  The mine removal squad with the Civil Security Agency collected another 169 objects and destroyed all of them in a nearby quarry.

Beware of the latest threats!

Over the past few years, industrial sites have been victimised by new forms of malicious attacks, including drone flyovers and computer hacking.

And with each one, a new defence tactic needs to be invented!

- Objective: **Lashing out during a company dispute with an individual (employee-employer disagreement, disgruntled former personnel, etc.) or during collective action (strike, demonstration)**

  Typical scenarios: Deliberate fires and pollution incidents, across all business sectors.

  21st JANUARY 2010, MISEREY-SALINES (ARIA 37920)
  An employee, in a dispute with his employer, illegally entered the premises of his surface cleaning company around 9:30 pm. He damaged machines and set fire to cardboard and pallets before stealing a vehicle. The fire was extinguished by public emergency responders.

  17th JULY 2000, GIVET (ARIA 18335)
  Subsequent to a strike called against their employer for placing the company under court-supervised liquidation, 153 redundant staff members occupying a viscose spinning room, poured 5,000 litres of sulphuric acid and dyes into a stream that ran through the plant and emptied into the MEUSE River. Fire-fighters were able to contain the pollution before it reached the MEUSE. A dispute resolution agreement was signed on 21st July. […]


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A few measures intended to remediate the vulnerabilities revealed by malicious acts

- Reinforce fences (replace a chain-link fence by metal cladding or a concrete wall, add barbed wire, etc.) and proceed with regular inspections for openings, breaches;
- Strengthen site access control procedures;
- Install or upgrade automated monitoring systems, especially during closing hours: anti-intrusion alarm, video surveillance, systems equipped with motion or heat detection;
- Contract or expand security services (increased frequency of inspection rounds, inclusion of dogs in the security detail);
- Secure closed sites: shutter access, remove all stray equipment and products;
- Protect vulnerable equipment: move sensitive machinery away from isolated zones; to the greatest extent possible, eliminate open-air storage of high-risk products;
- Spot any signs of potential concern (occurrence of several similar attacks in the vicinity or at multiple sites belonging to the same industrial group) and take into account all experience feedback (correct security inadequacies revealed by prior on-site accidents or at equivalent sites: fencing, configuration of storage areas, etc.);
- Engage in regular contact with domestic security forces (national police or national gendarmerie) to ensure that security teams remain fully up-to-date regarding sensitive installations, the various safety systems and each site's particular points of concern.

For further information: Synthesis report based on an analysis of 850 accidents occurring in France and involving malicious acts, entitled: "Accident study findings on malicious acts in industrial facilities" (October 2015): http://www.aria.developpement-durable.gouv.fr/analyses-and-feedback/by-theme/?lang=en