MJV Ravenna

Emergency planning and management

Rouen accident 2019

FR feedback

16-18 Oct. 2024

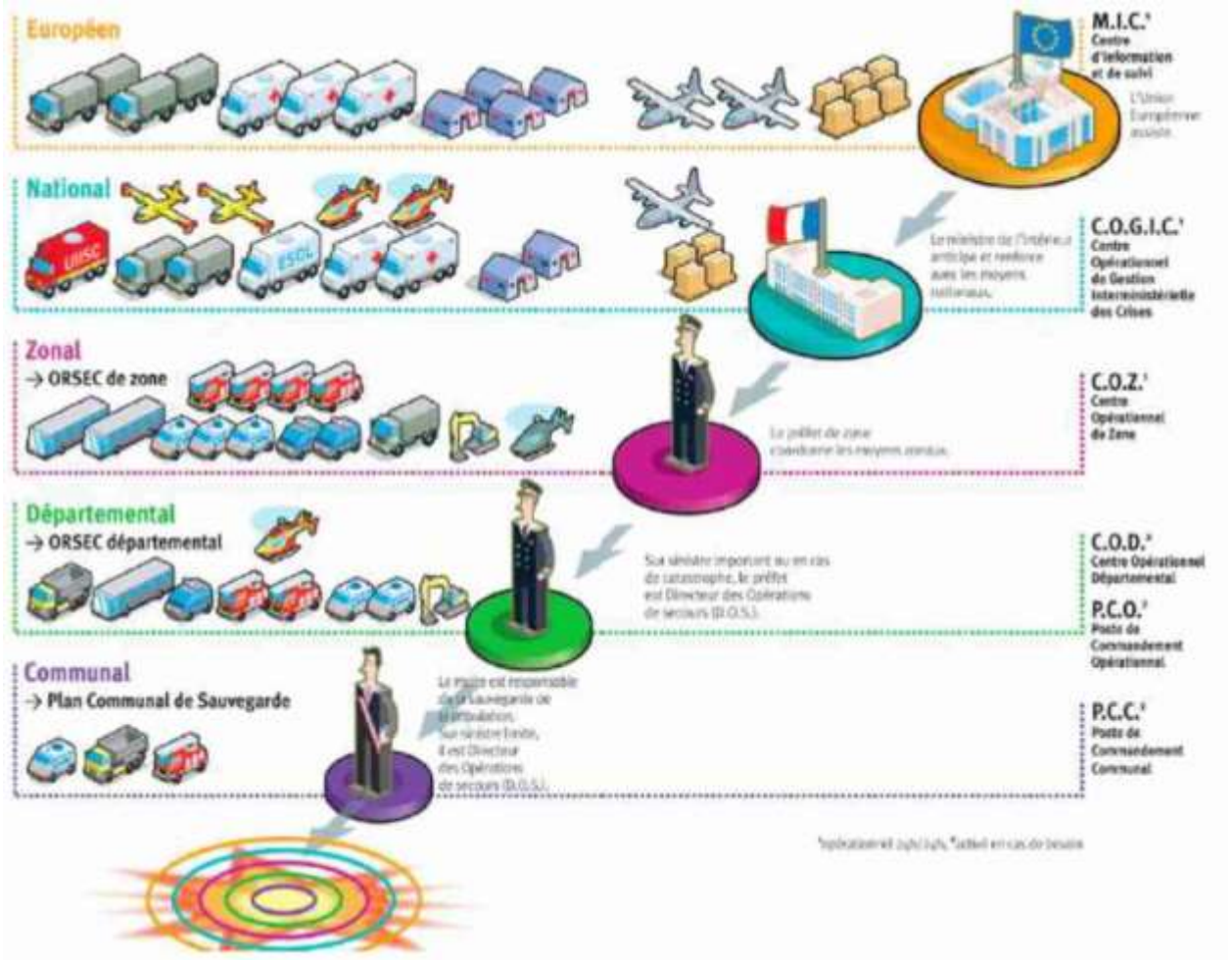
MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE,
DE L'ÉNERGIE, DU CLIMAT
ET DE LA PRÉVENTION
DES RISQUES

Liberté
Égalité
Fraternité

Agenda

1. Crisis management and emergency planning
2. Presentation of the 2 companies
3. Timeline of the events
4. The rescue operations
5. The consequences
6. Environmental sampling
7. Feedback

Crisis management - chain of command



EU level

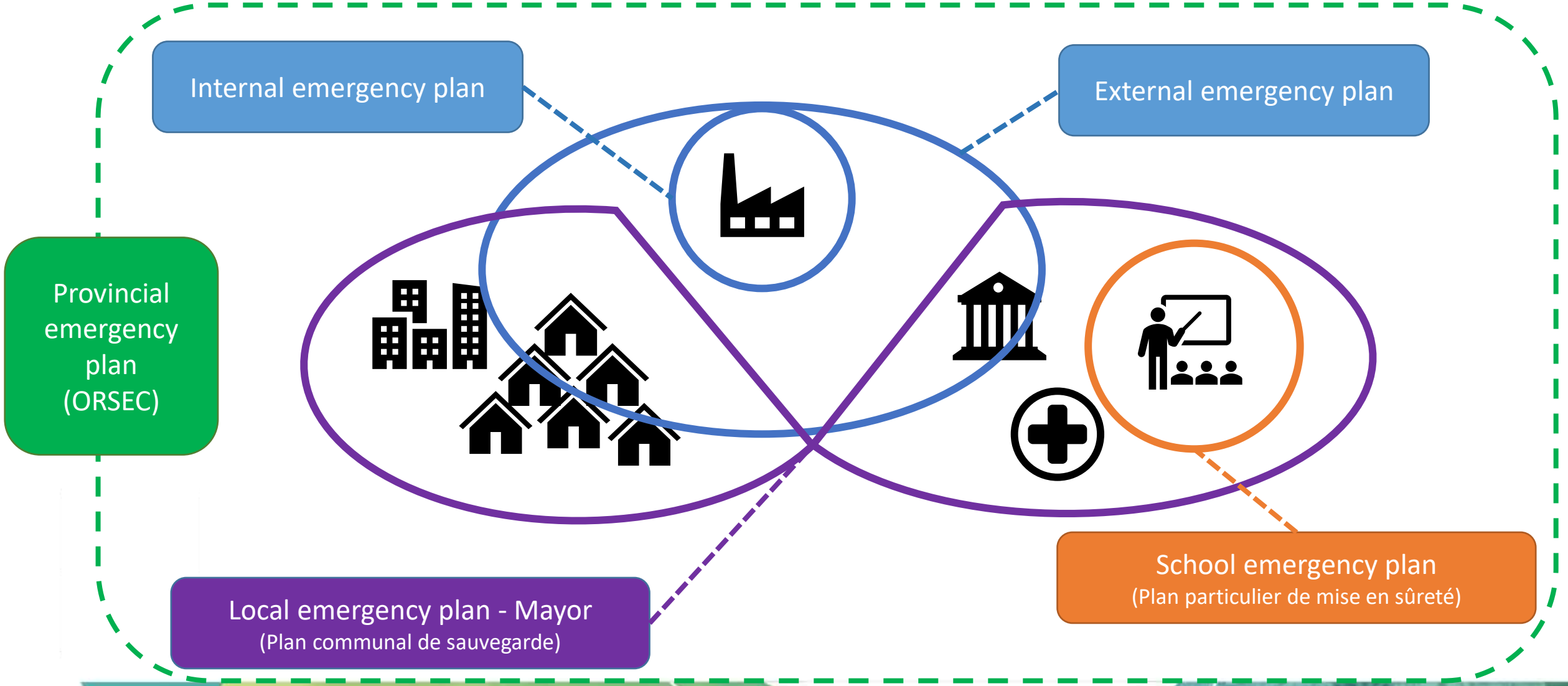
National (Minister of interior)

Defence zone (Prefect of the zone)

Province (Prefect)

Municipality (Mayor)

Interactions between the different emergency plans



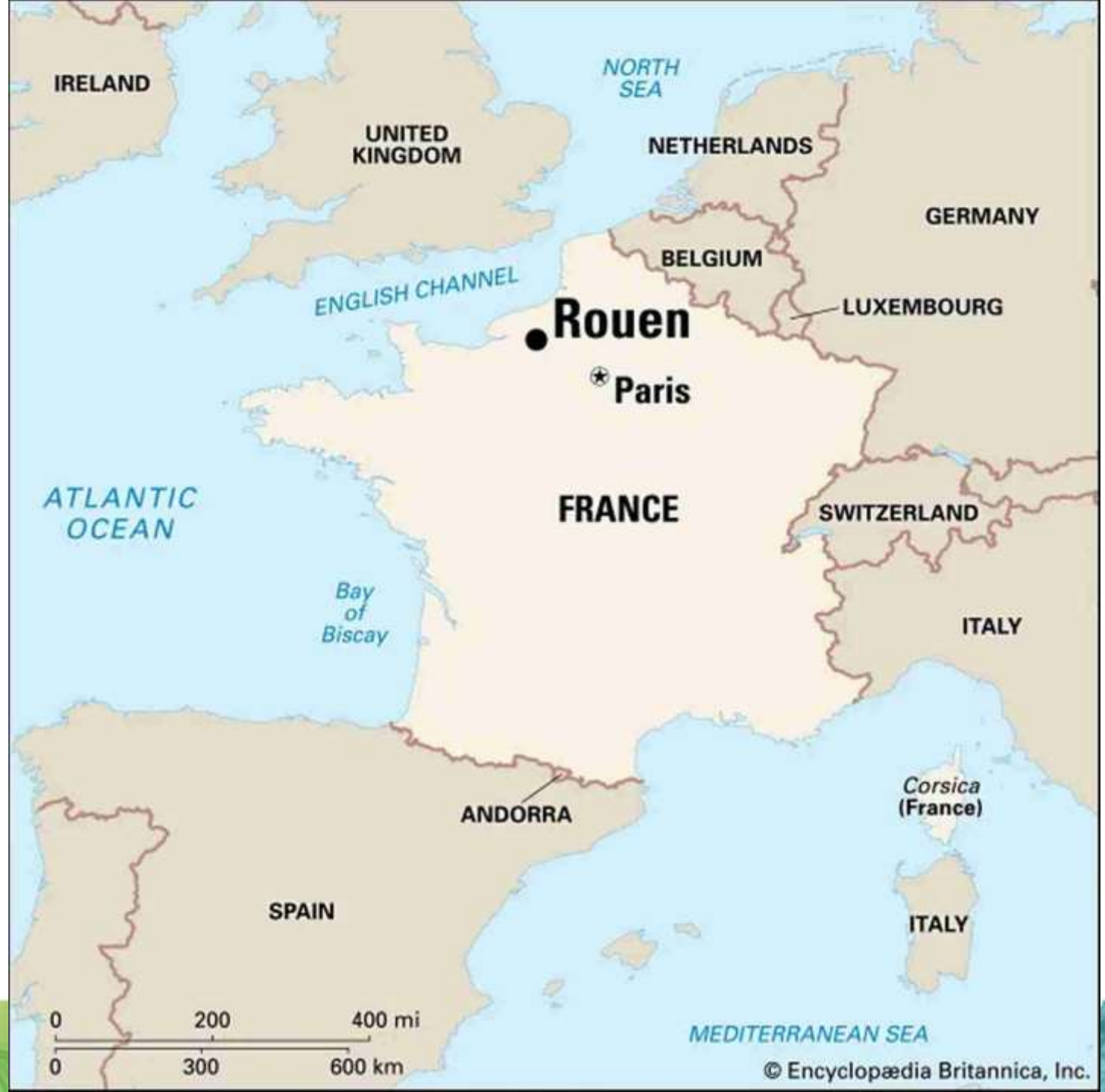
Missions of environmental inspectors

- Coordinating the recovery and temporary storage of polluted materials (including the management of waste resulting from the treatment of marine pollution), when the pollution originates from an industrial installation
- Providing technical and regulatory support to the Prefects: opinion and proposal of a strategy to manage the crisis
- Inspecting and collecting information
- Analysing the information and providing expertise on accident scenarios
- Proposing emergency regulatory measures
- Preparing the ‘after’ and the follow-up of the accident

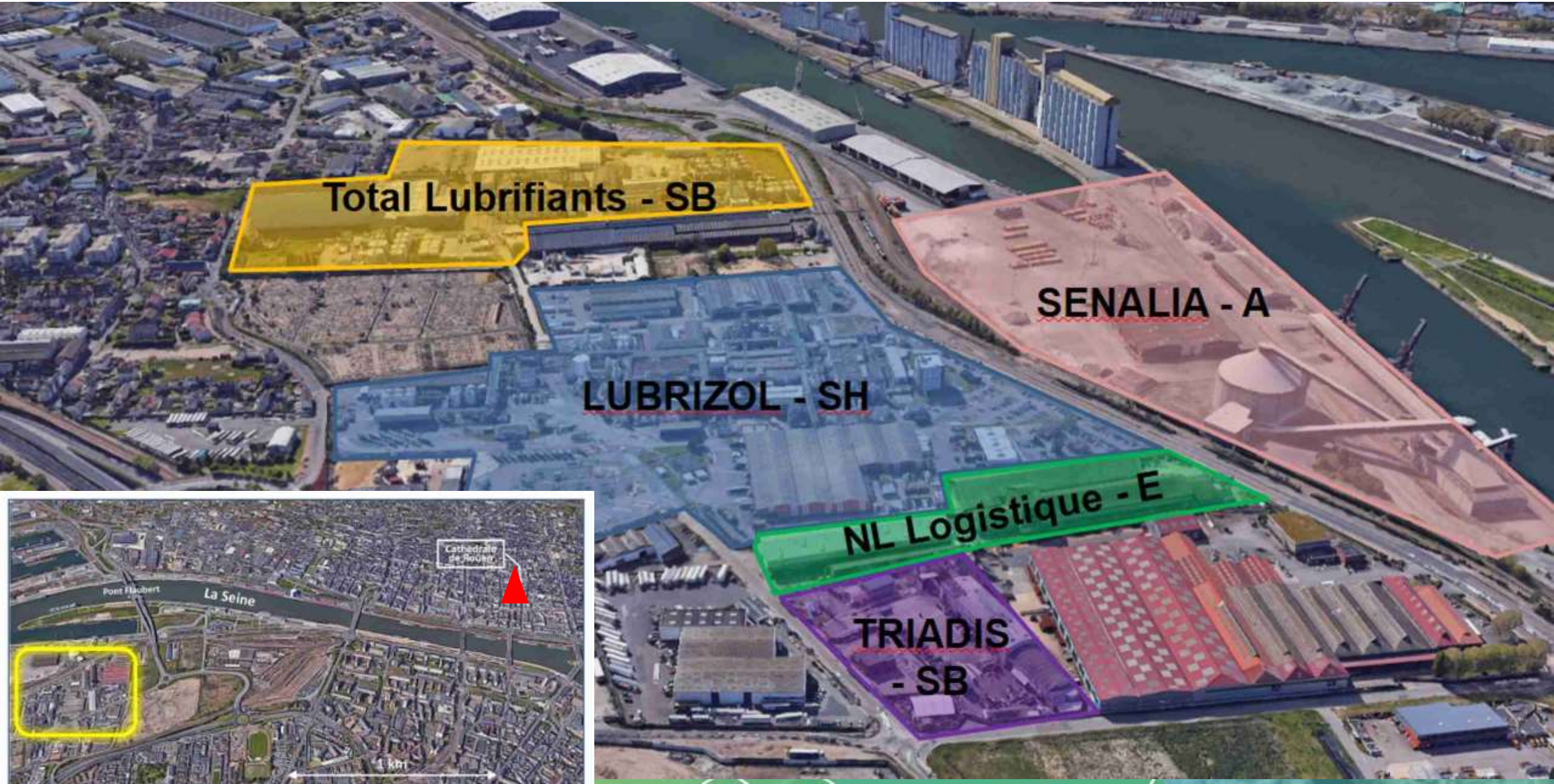
LUBRIZOL – NL LOGISTIQUE

26 September 2019


26 September 2019 – 3:24 am


IRELAND
UNITED KINGDOM
NORTH SEA
NETHERLANDS
GERMANY
BELGIUM
ENGLISH CHANNEL
LUXEMBOURG
Rouen
Paris
ATLANTIC OCEAN
FRANCE
SWITZERLAND
Bay of Biscay
ITALY
ANDORRA
Corsica (France)
SPAIN
ITALY
0 200 400 mi
0 300 600 km
MEDITERRANEAN SEA
© Encyclopædia Britannica, Inc.

Zone d’activités :



Lubrizol

- LUBRIZOL FRANCE : 3 production sites (Rouen, Le Havre and Mourenx)
- Headquarters based in Rouen
- Annual turnover ~ € 800m ~ 500 employees
- Manufacturing activity :
  - additives for engine oils and other transport fluids
  - additives and fluids for industrial lubricants and automotive fuels
  - additives for surface coating products
- LUBRIZOL Rouen: founded in 1954, 14.4 ha, ~ 200 employees, 24-hour operation
- Manufactures mainly lubricant additives and paint gels.
- Emergency planning and LUP approved in 2014 (towns of Rouen and Petit-Quevilly)

NL Logistics

- NL Logistics
- First permitted in 1953 (general warehousing)
- Not Seveso but medium tier on the FR industrial risk classification (storage of combustible products)
- 4 storage buildings: 82,000 m3
- Stored products register on the day of the accident : 9 050 t of products stored
  - 4,157 t of Lubrizol products
  - 139 t of Total products
  - 4,750 t of miscellaneous products (tyres, rubber, magnesia, bauxite, site equipment, etc.).
- No hazardous product according to Seveso classification

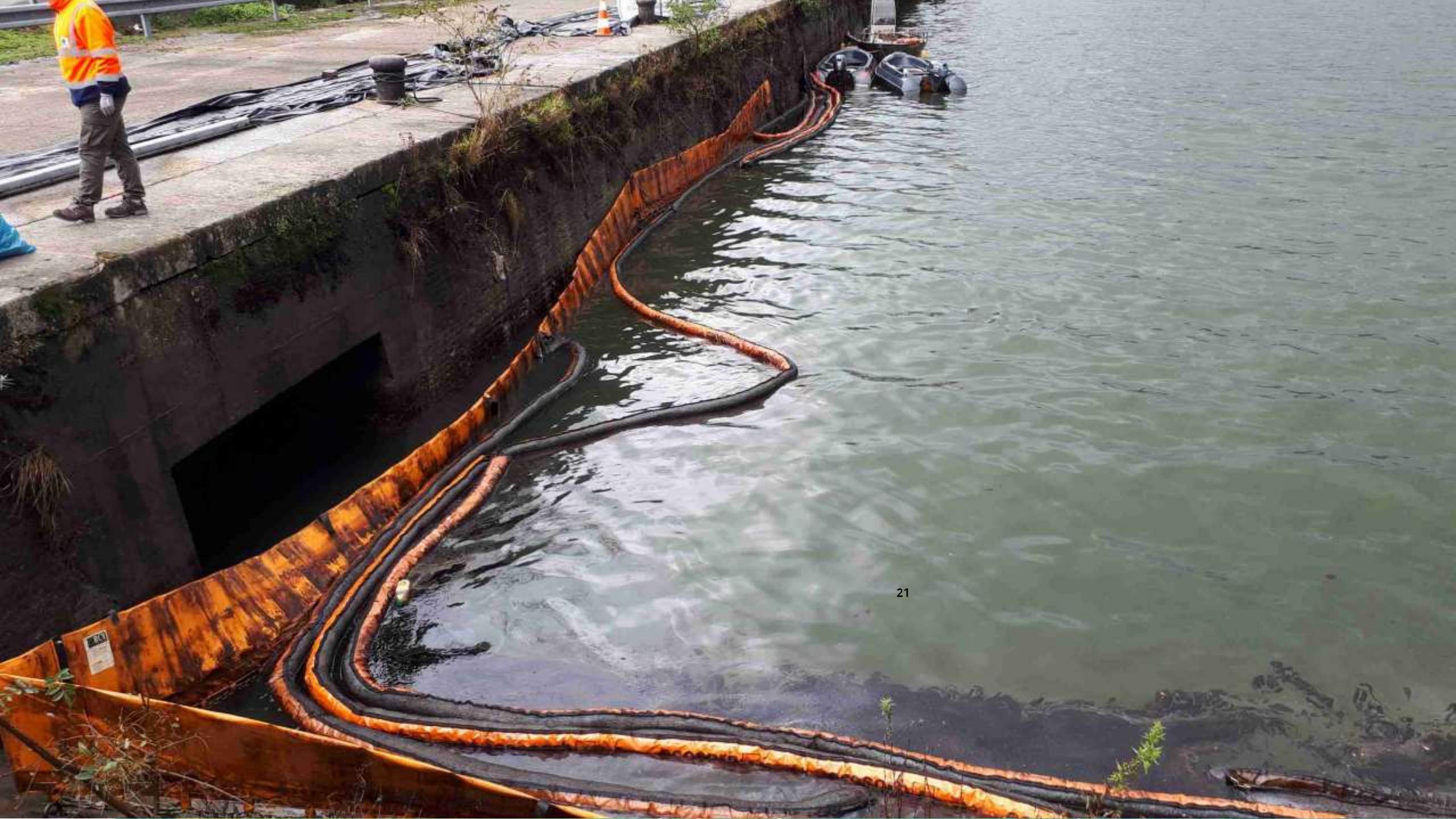

Google


14

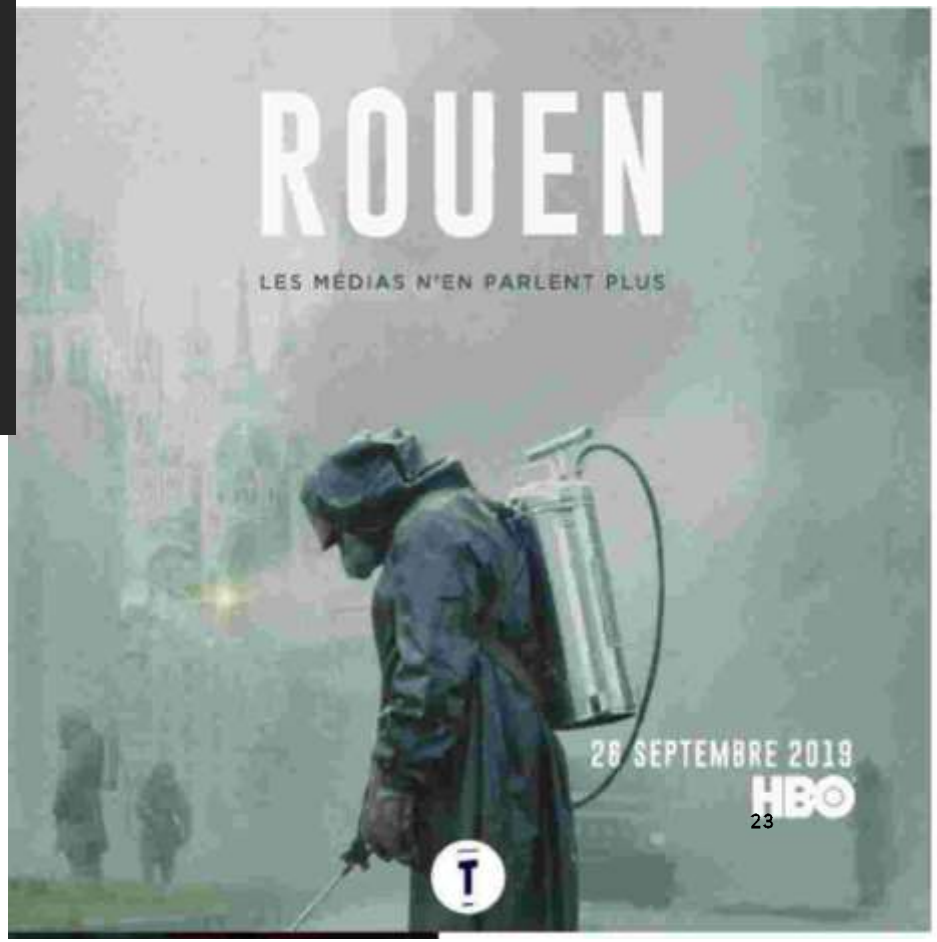
The cause of the fire has not yet been determined and its location is still not known with precision, despite the investigation

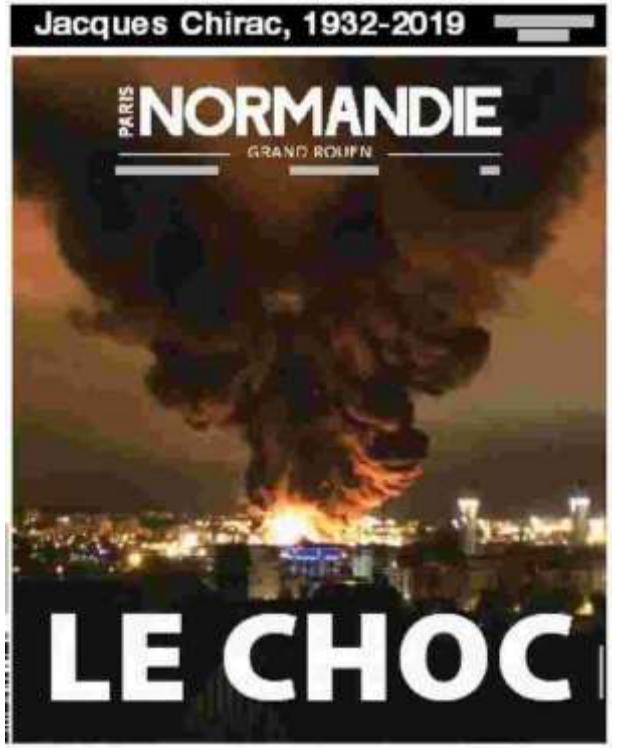
Timeline of the accident

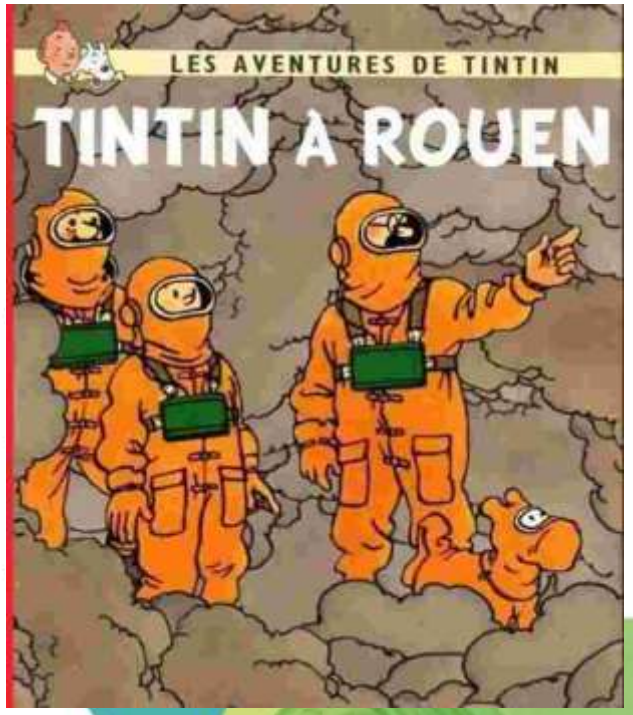
- 2:35 am: first alarm on Lubrizol site (origin not yet known)
- 2:54 am: pumps for the fire extinguishing system are started
- 3:16 am: arrival of the first fire brigade on site
- 3:21am: alert is given to environmental inspector on duty
- 4.50 am: extinguishing systems are out (no more water available)
- 5.35 am: fire spreads, gas cylinders boil over
- 6.30 am: operator command center retreats to TOTAL neighbouring site
- 6.40 am: massive arrival of firefighters on site (up to 280 firefighters, 53 vehicles)
- 7.50 am: 2 sirens from the EEP are activated, water is restored via pump boats (15km of hose connecting the site to the Seine river)
- 10.40 am: use of extinguishing foam
- 1:00 pm: fire under control
- 15:00: fire extinguished



Communication: a tricky exercice







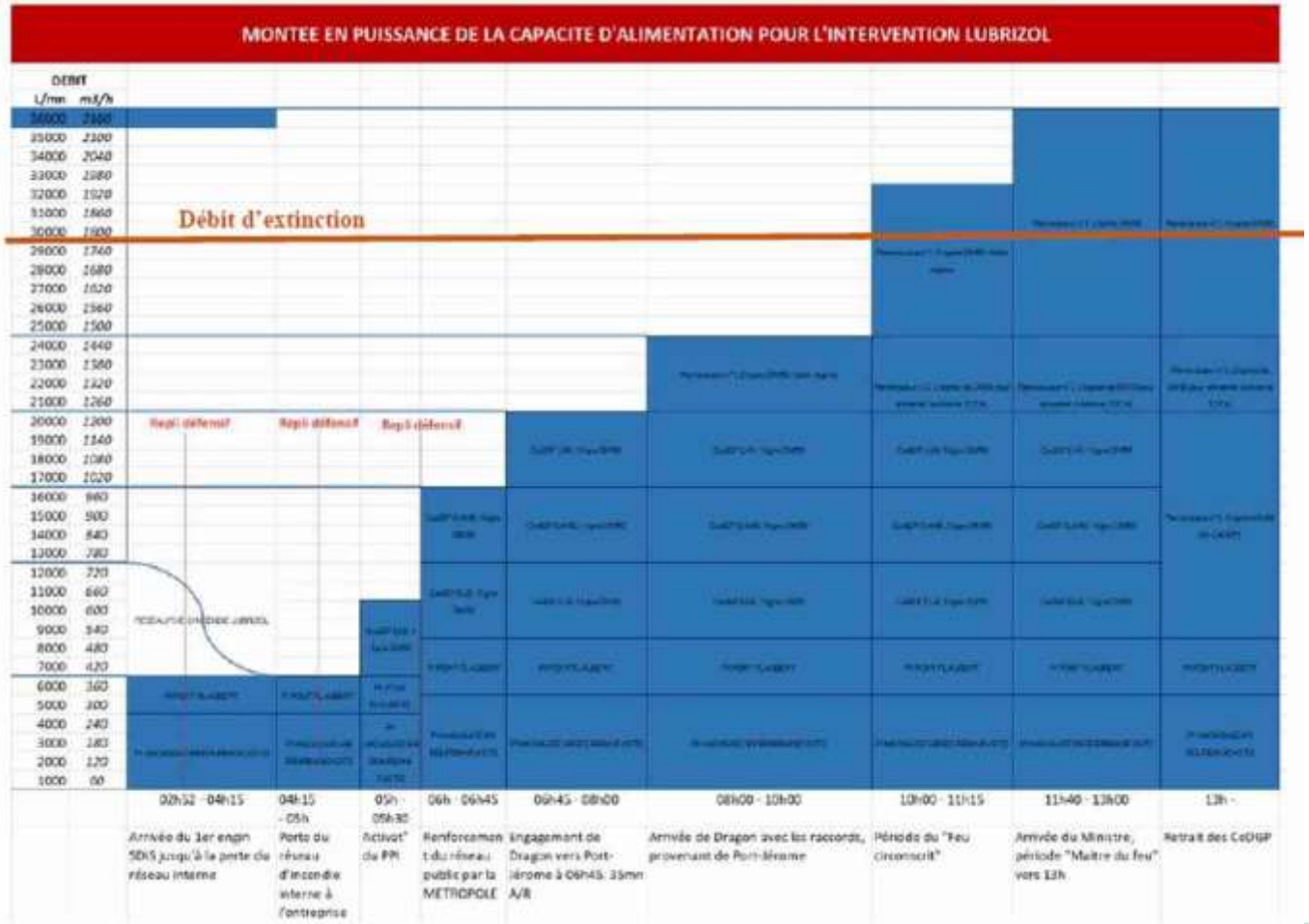
Operational data and figures

- 3 hectares of surface area on fire
- ≈ 9500 tonnes of liquid fuels burnt
- 276 firefighters on site
- 46 vehicles mobilised
- 15 km of hoses
- 3 tugboats pumping from the Seine
- mutual assistance from several operators in the department
- ≈ 1 m^3 of water used per m^2 on fire
- ≈ 3.5 litres of emulsion per m^2 on fire
- 3 anti-pollution barriers deployed in the Seine dock to contain the pollution
- Time to bring fire under control in ≈ 10 hours 30 minutes

Water resources ramp-up

Schéma du dispositif hydraulique (Cne KOPYLA)

MONTEE EN PUISSANCE DE LA CAPACITE D'ALIMENTATION POUR L'INTERVENTION LUBRIZOL

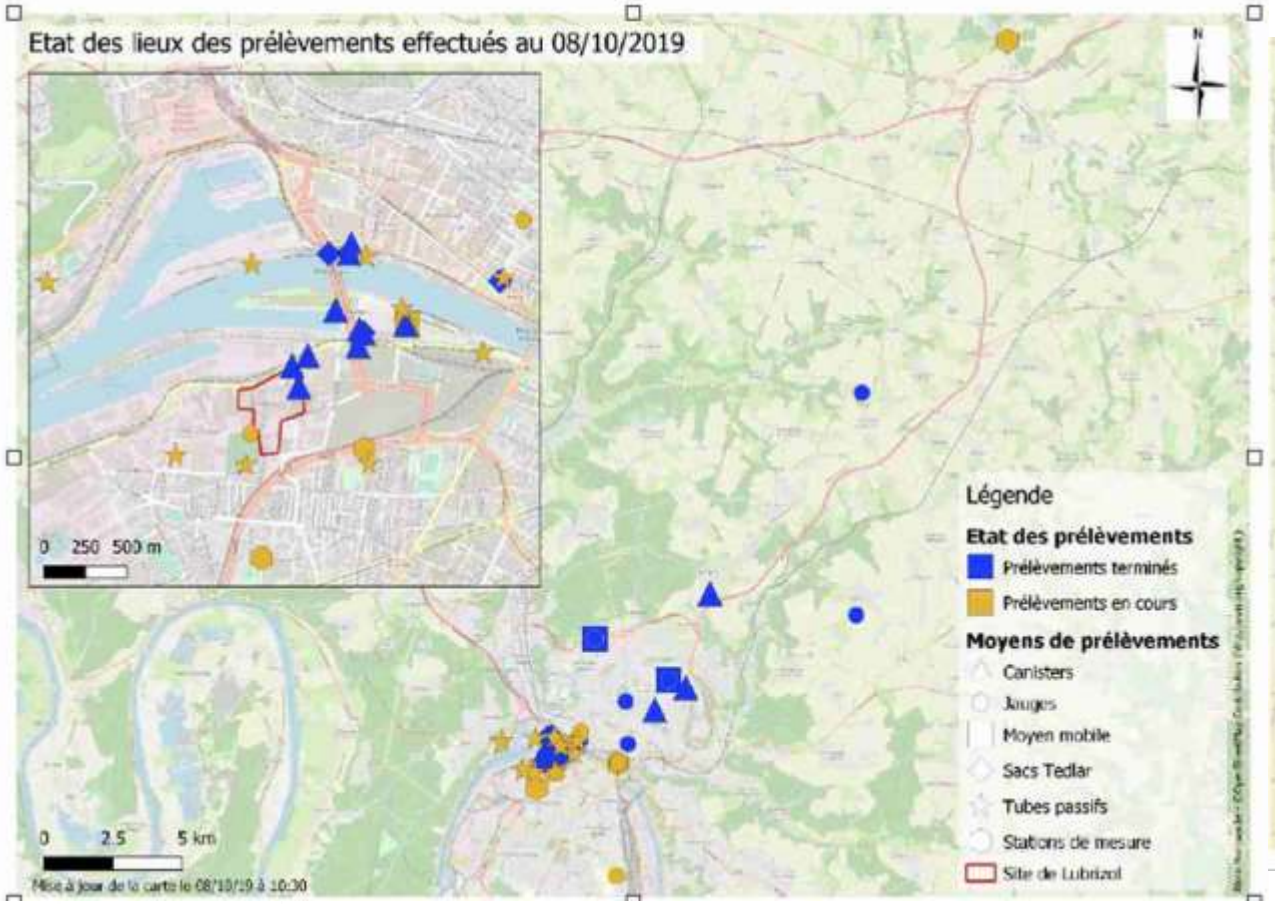


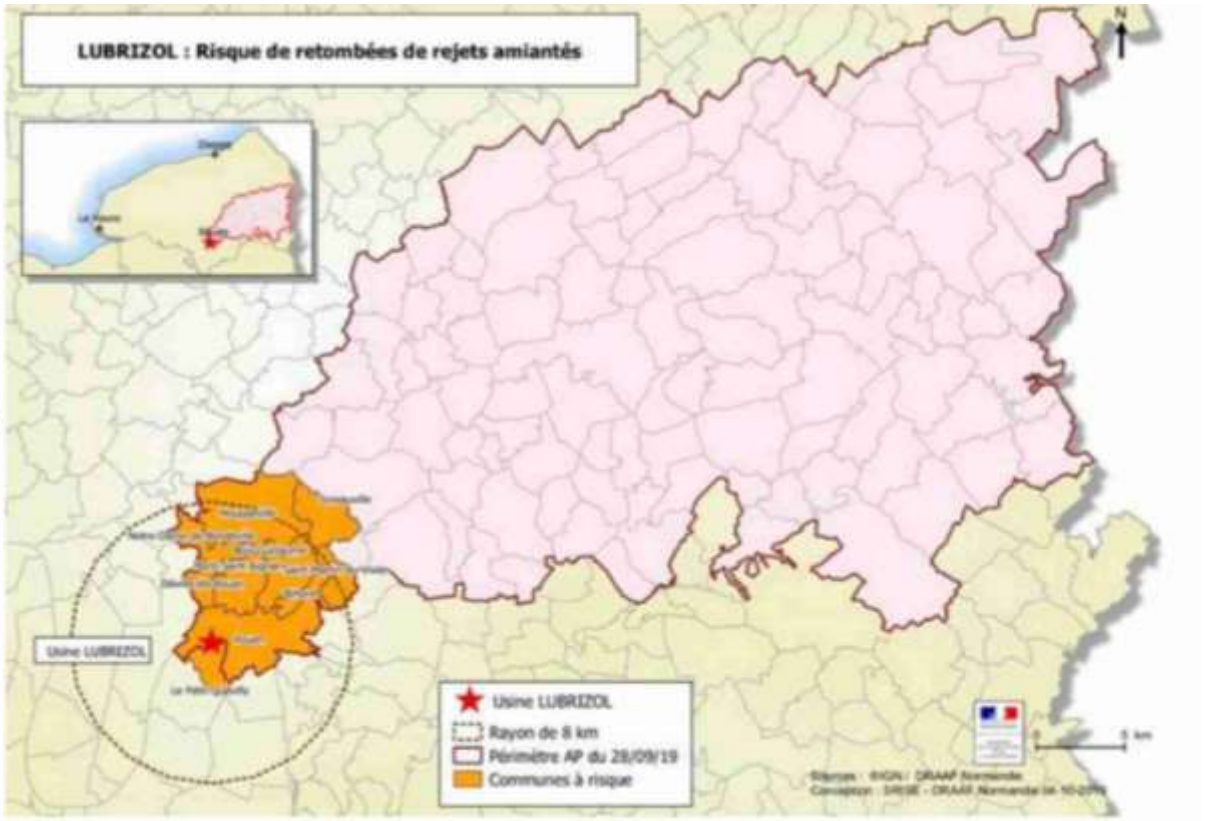
Crisis management - Prefecture

- 5:25 am: EEP is activated, confinement requested within 500 m
- 5:45 am: Support request to the Ministry and the Paris and Northern France crisis management teams
- 07:30 am: decision to close schools in the 12 towns downwind
- 07:40 am: Local fire brigade requests resources from neighbouring companies (no agreement between manufacturers)
- 07:50 am: two sirens closest to the site (Rouen and Petit Quevilly) are activated
- 10:30 am: crisis unit is activated at Rouen Hospital
- 11:30 am: Minister of Interior arrives at the crisis management centre
- 1pm: fire is under control
- 2.30 pm: official message from the Prefect to the mayors via the automatic alert system
- 2.30 pm: anti-pollution barriers are deployed on the Seine river, at the dock (oil slick of around 2,000 m^2 contained, with difficulties due to the tides)
- 3 pm: the Prefecture's Public Information Centre receives more than 1 200 calls.
- 3:45 pm: containment is lifted within the 500 m perimeter
- On-site deployment of : 240 fire-fighters, 90 police officers, 46 gendarmes, 50 vehicles

Analyse of the environmental impact

- Emissions to air
  - Combination of real-time measurements and samples for later lab analysis using various instruments
  - Sampling performed by firefighters, local air quality monitoring associations, specialised labs
  - Samples taken on site, in the direct and medium-range vicinity of the site, and up to 15 km from the site following the wind direction
  - Measured values generally remained inferior to reference toxicity values for short-term exposure (except for benzene and PAH)
- Emissions to water
  - Samples taken in underground waters, the docks, on agricultural production installations, drinking water supplies


Etat des lieux des prélèvements effectués au 08/10/2019
N
0 250 500 m
0 2.5 5 km
Mise à jour de la carte le 08/10/19 à 10:30
Légende
Etat des prélèvements
Prélèvements terminés
Prélèvements en cours
Moyens de prélèvements
Canisters
Jauges
Moyen mobile
Sacs Tedlar
Tubes passifs
Stations de mesure
Site de Lubrizol


LUBRIZOL : Risque de retombées de rejets amiantés
N
Usine LUBRIZOL
Rayon de 8 km
Périmètre AP du 28/09/19
Communes à risque

- Court investigation for some inspectors
- Major mobilisation on this file to the detriment of others
- 7 weeks after the accidents, 6 inspectors are still 100% mobilised on the subject
- Storage in fusible containers -> flammable slick

- Faulty and undersized water system
- Overall site storage not tight
- Non-compliant outdoor storage conditions
- Regulatory and technical status of combustible liquids (most oils are not classified as hazardous under Seveso)
- Domino effect not sufficiently taken into account
- Unavailability of an accurate inventory (several days were necessary to get one from the operators)
- Insufficient information to the wider urban area population

- No death or direct injury
- Effective risk reduction at source: a GPL tank located between NL Logisitics and Lubrizol was removed a few years before
- Regular emergency drills (staff well trained, contacts well known and identified)
- Adequate number and type of sampling tools from the fire brigades
- Adequate equipment on the Seine river (tugboat and floating barriers)
- Solidarity between plant operators (fire fighting equipment)
- Adequate measurement taken during the first hours in the environment
- Only 15% of the Lubrizol site impacted