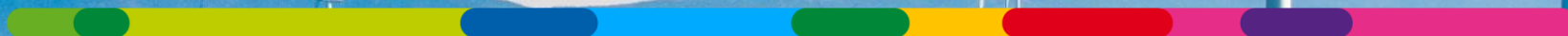


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# Presentation security / environment

## Third-party firms

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# Welcome to the SOUTH

## Conventional Generation Zone



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# Table of Contents

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## Chapter 1

General rules

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## Chapter 5

Risks

## Chapter 6

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## Chapter 7

Environment

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# 01

## General rules

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# General rules

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- Ensuring individual health and safety
- Respecting the environment



# General rules

- Prohibitions and restrictions:

- No alcohol
- No drugs
- Smoking ( even also electronic cigarettes) => only at smoking bus shelters
- In some places, mobile phones and electronic devices are prohibited
- Fire hoses to be used only in the event of a fire



# General rules

- Entry:

- Site entry after company declaration and good standing from LIMOSA.
- Your company must have submitted in advance its Safety, Health and Environmental Plan (SHEP) and confirmation that it has read and understood the safety, health and environmental regulations for contractors (doc 1a/1b).
- Receive the safety/health/environment presentation
- Pass the safety test
- You will then receive an access badge.





# General rules

- Badges received to access the site must be systematically returned at the end of the assignment (to the guard or via the dedicated letterbox).
- You must keep your badge on your person at all times. This will allow for a faster head count at the assembly point in the event of an alarm.
- Use designated parking spaces.
- Obey the maximum speed limit (20 km/h)
- Pressurised cylinders must be secured using non-flammable material.



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# General rules

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- Living spaces:
  - Meals in designated areas
  - Neatness and cleanliness
  - Always kept clear (marked parts storage area, tool cupboards, work benches, and so on)
  - Workspaces tidied



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02

# Emergency response

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# Emergency response

- Reminder: all companies must handle their own first aid (presence of a first aid kit, first aid workers)
- For more serious injuries: single emergency number: **4444**



# Emergency response

- Three emergency signals:

- Warning (alert)



- Intermittent sound: signal for **ENGIE Electrabel** FRT/first aid worker - no action required; listen for audio instructions

- Evacuation (alarm)



- **Modulated sound** → evacuate immediately to the assembly point wearing your badge.
- **Do not use lifts and do not return to the changing rooms.**
- **Even if the signal stops, go to the assembly point and wait for the end-of-alarm signal.**
- **Swipe your badge at the assembly point!**

- End of alarm



- Continuous sound: return to authorized site.

- DRILL= the first Thursday of every month around noon

- The alert signal may be accompanied by a spoken message.



# Emergency response

- In the event of an accident, significant contamination or an environmental incident
  - The single internal emergency number : **4444**  
(the control room)
  - Inform your supervisor or an **ENGie Electrabel** manager (in charge of work)
  - Possible support from the onsite **ENGie Electrabel** First Aid Team
  - If transportation to a hospital is required, this must be done in an ambulance (transportation to hospital may not be performed by co-workers, friends, family, your own car, and so on)



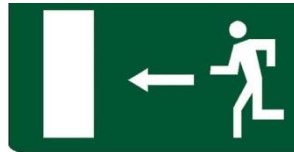
# Emergency response

## Evacuation

- How to read signs and follow the rules in the event of an evacuation:
  - Evacuation will always be made using normal exit routes, just follow these signs:



- If the normal exit is not accessible, use the emergency exit by following these signs.



- Do not be surprised by the route taken, it is a safe route that will guide you to the assembly point



# Brandfall:

## In the event of a fire:

- In the event of a fire:

- The single internal emergency number : **4444**
- Do not put yourself in danger
- Only trained individuals should take action against an outbreak of fire
- Use the extinguishers on hand where you are
- Close the fire doors behind you





# Emergency response

## Incident involving chemical products

- In the event of an incident involving chemical products:
  - Use the nearest showers and eye wash stations
  - SPS (Self-Contained Portable Showers) available



03

# Authorisations



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# AUTHORIZATIONS

—



# Authorisations Start and end of work

- Objective: joint exchange of information between companies and **ENGIE Electrabel**
  - ENGIE Electrabel** → Third party: what are the risks inherent to our site?
  - Third party → **ENGIE Electrabel**: what are the risks introduced by your involvement?

- Outcome:
  - preventive measures to be taken

**Electrabel** DOCUMENTS OUVERTURE DE CHANTIER  
TRAVAUX AVEC DES TIERS (entreprises extérieures)

Avant tout travail avec des tiers, le chargé des travaux doit accomplir chacune des étapes ci-dessous :

**Préparation du travail:**  
préparation technique et planification du travail.  
(Équipement de sécurité homologué)  
4444

**Préparation des documents:**

- Plan Sécurité, santé et environnement à réaliser aux prestataires (PSSE)
- Analyse de risque du chantier
- Fiche MSDS/SDS
- Produits émis sur le site
- Liste d'événement
- LMRGA

• Plier en compte par les prestataires du "Règlement général de sécurité, santé et environnement" et de règlement spécifique de la zone.

• Signature des annexes 1A/1B/1C

**CARE**

Care donne un avis et le bonnet de démarrage de complétement aux chargés des travaux.

**Autorisation de travail**

C'est seulement après la réalisation de ces premières étapes que le chargé des travaux signe l'ouverture de chantier.

**Compléter et signer l'ouverture de chantier.**

**LMRA à compléter sur le chantier.**

A joindre à la DDC (document final)

**Le tra come**

Après réalisation du chantier, compléter et signer la

**Electrabel** Document d'ouverture de chantier  
En application du chapitre IV (art.8) de la loi du 04 août 1996

GSM chargé des travaux EBL: \_\_\_\_\_  
GSM chargé des travaux prestataire: \_\_\_\_\_

Risques encourus par les agents de l'entreprise extérieures des aux installations ELECTRABEL, en autres domaines:

- Travaux en hauteur
- Appareil de rivage et de manutention
- Produits dangereux
- Intoxication / asphyxie
- Produits inflammables et /ou explosif
- Appareils thermiques (brûlures et contacts)
- Installation à démarrage automatique
- Machines tournantes à proximité
- Fluide sous pression
- Démontage de protection collective
- Travail à distance (sur ou point chaud) (soufflage, coupage, découpage...)
- Courants transportés
- Travaux à l'intérieur d'un espace confiné
- Pression de vapeur gaze
- Bruit
- Poudrière
- Coup partiel
- Bord de seuil
- Risque préverse armée ou FCR
- Chute de matériaux
- Risque électrique
- Démarrage inattendu
- Equipement isolant
- Ouverture dans le sol
- Connaissance du plan des tuyaux, sables, électricité ou équipements dans le sol
- Autres risques

Risques ATEX: \_\_\_\_\_

Autres travaux en cours dans la zone de travail: \_\_\_\_\_

Risques particuliers pour les agents ELECTRABEL du fait de l'entreprise extérieures:

- Travaux superposés
- Appareil de rivage et de manutention
- Chute d'objet
- Ouverture dans le sol
- Poudrière
- Encroûtement des aires de circulation
- Coup d'arc électrique
- Pénétration de matière indésirable
- Bruit
- Proximité de matière radioactive
- Produits dangereux
- Démontage de protection collective
- Démarrage inattendu
- Douleur
- Moulage
- Contrôle gammagraphique
- Déchets
- Pollution
- Autres risques

Délimitation de la zone de travail: \_\_\_\_\_

Horaires prévu: \_\_\_\_\_

Equipements sociaux: \_\_\_\_\_  
Il est convenu qu'ELECTRABEL, mettra à disposition de l'entreprise extérieures ses équipements sociaux suivants:

vestiaires et douches  
Régénérateur

Site: \_\_\_\_\_ Entreprise extérieures: \_\_\_\_\_ Date de début: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Dossier commandeur: \_\_\_\_\_ Nature des travaux: \_\_\_\_\_

Mesures de protection à charge de l'entreprise extérieures

**Sécurité**

- Protections actives
- Barrières, filets, gants, coqueurs
- Rapport de visite ou étiquetage origin
- Eclairage adéquat en 24V ou TBG
- Protection de chantier de sabots
- Fret de protection (ou autres)
- Barrage zone de travail
- Barrage ouverture au sol
- Evénement de matière indésirable
- Filtre de chaque produit dangereux
- Protection travaux en hauteur
- Protection travaux superposés
- Echauffage confinement
- Masque, lunettes de face
- Sorties de secours dégagées
- Protection contre la rayons

Autres mesures: \_\_\_\_\_

Mesures de protection à charge d'ELECTRABEL

Echauffage confinement – réaction

Procédure de congélation

Barrage de la zone de travail

Barrage ouverture

Evénement de matière indésirable

Filtre de protection (ou autres)

Barrage chute de pièce dans les équipements (PME)

Autres mesures: \_\_\_\_\_

Après chantier compléter le document de clôture de chantier

Communication  
Règlement général de sécurité pour entrepreneurs lors de réalisation des travaux  
Comptes de sécurité en vigueur à la centrale disponible sur: <http://www.electrabel.be/fr/medias/actualites/communication>

Observations diverses et risques résiduels: \_\_\_\_\_

Realiser la LMRA sur chantier

Electrabel  
Nom et signature \_\_\_\_\_  
Fait le: \_\_\_\_/\_\_\_\_/\_\_\_\_

Entreprise extérieures  
Nom et signature \_\_\_\_\_  
Fait le: \_\_\_\_/\_\_\_\_/\_\_\_\_

COLLATIONNE: Analyse de risque sécurité  
Fait le: \_\_\_\_/\_\_\_\_/\_\_\_\_

# Authorisations

- Work authorisation:
  - Required document
  - Issued by the plant manager
  - Received by the person in charge of the work (usually a person from **ENGIE Electrabel**)
  - Risk analysis prior to work (for example, using the KINNEY method) provided by your company + LMRA

**Please note, once the work has been completed, the “work permit” document may not be taken off the site.**

# Authorisations

- LMRA or Last Minute Risk Analysis (on-site risk analysis immediately prior to the start of work)
  - ❑ The LMRA allows the risks actually found on site to be taken into consideration.
  - ❑ The LMRA is required, it must be completed on site by the work supervisor in cooperation with the contractees.
  - ❑ The LMRA must be redone each time the working conditions, environment or work teams change.
  - ❑ The LMRA must accompany the authorisation for work and start of work on the work site.

# Authorisations

- Scaffolding:
  - All requests to set up scaffolding must be made through the scaffolding coordinator.
  - Do not make any alterations to scaffolding. Please ask the scaffolding coordinator to take care of any alterations that are needed.
  - Scaffolding must be approved prior to its use.
  - Scaffolding must be checked each week (see the dates on the scaftags)



# Authorisations

- Scaffolding:
  - The erector must have affixed a TAG on the scaffolding
  - Some scaffolding requires design notes and is approved by a certified organization.
  - Only trained individuals may use scaffolding

Placing handling equipment on scaffolding is prohibited (without prior authorization, specific design note and inspection)





# Authorisations

- "Fire" Permit:
  - This permit (initially issued with the work authorization) is MANDATORY when working with open flames and flying sparks, as well as for all actions that may produce a source of heat.
  - If grinding or welding work is necessary for your work and was unplanned or if you do not have a fire permit: re-contact the work supervisor, who must obtain a fire permit.



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# Authorisations

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- "Excavation" permit:
  - An excavation permit must be obtained for all work requiring an opening in the ground deeper than 30 cm.
  - In general: the first 50 cm must be excavated manually.



# Authorisations

- Application of the "ENGIE Electrabel confined space" procedure:

- ❑ Enclosed space
- ❑ Difficult access
- ❑ Potentially hazardous atmosphere
- ❑ Guarding of the area is required
- ❑ Measurement of oxygen and toxic or asphyxiating gases
- ❑ Emergency lighting
- ❑ Respiratory protection, and so on
- ❑ Tools are powered by an external safety transformer.
- ❑ Lighting facilities are supplied with a very low safety voltage in dry ( $U < 25 \text{ VAC}$  or  $U < 60 \text{ VDC}$ ) and damp conditions ( $U < 12 \text{ VAC}$  or  $U < 30 \text{ VDC}$ ).



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# Authorisations

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- Electrical equipment (live):
  - Unauthorized access is strictly prohibited



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# Authorisations

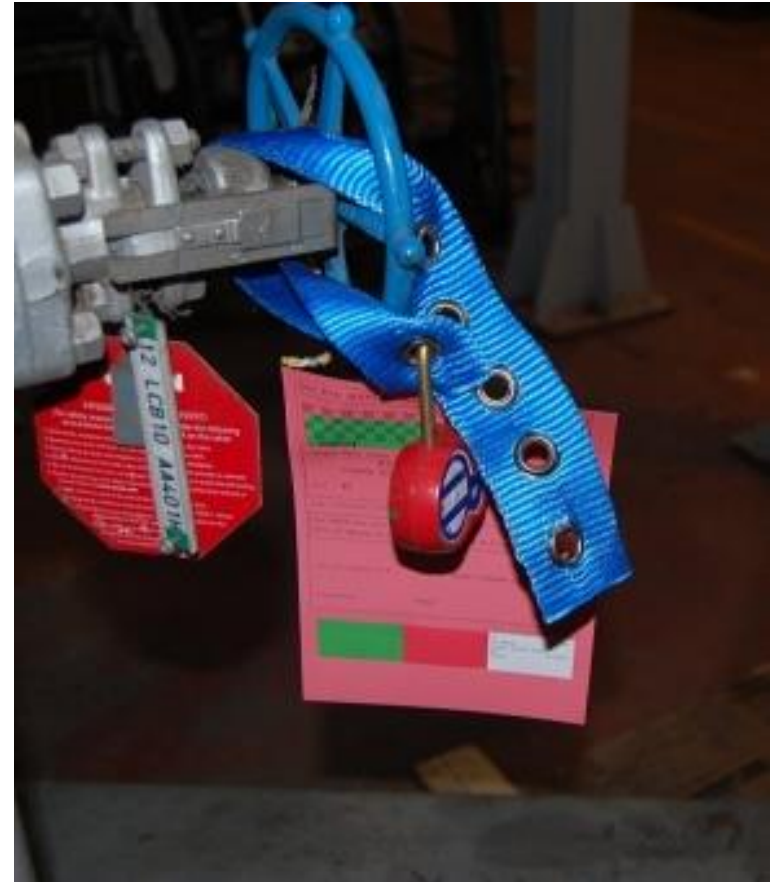
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- Forklifts:
  - Strictly prohibited unless:
    - You are certified
    - And you can provide proof of your certification to the work supervisor in the form of a valid official written document.



# Authorisations

- Machine lockout-tagout
  - Work cannot commence until authorization has been received from the plant manager (**ENGIE Electrabel**), who issues this authorization to the work supervisor.
  - The work area will be locked out and tags will be affixed to it.
  - Performing operations within the facility is prohibited.



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# Authorisations

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- The foreman: your contact
  - Will provide you with the necessary authorizations and permits
  - Will be in charge of site opening and completion, the Last Minute Risk Analysis (LMRA)
- To be contacted automatically
  - In the event of any change to working methods
  - In the event of any unforeseen circumstances
  - Present at least during critical phases



# Authorisations







## Marking of plant and lifting equipment

- The color of the cable tie refers to the year of validity.
- The figure written on the partex marker stipulates the use-by month.

Use prohibited in the event of absence of marking or beyond the validity period  
or in the event of defect

Color code ENGIE Electrabel, work equipment legally subject to inspection

Color ribbon

2016 - 2022 - 2028	=	
2017 - 2023 - 2029	=	
2018 - 2024 - 2030	=	
2019 - 2025 - 2031	=	
2020 - 2026 - 2032	=	
2021 - 2027 - 2033	=	

Numerical code

03	=	31 march
06	=	30 june
09	=	30 september
12	=	30 december





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# 04

## Personal protective equipment

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# Personal protective equipment

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# Personal protective equipment (PPE)

- Mandatory in all technical facilities: helmet, safety glasses and safety boots
- + job-specific protection equipment (based on your risk analyses). Example: hearing protection devices, gloves, respiratory mask, face visor, and so on).
- Please note: if appropriate scaffolding is not available, you must wear a safety harness and a suitable safety strap when working higher than two meters up.

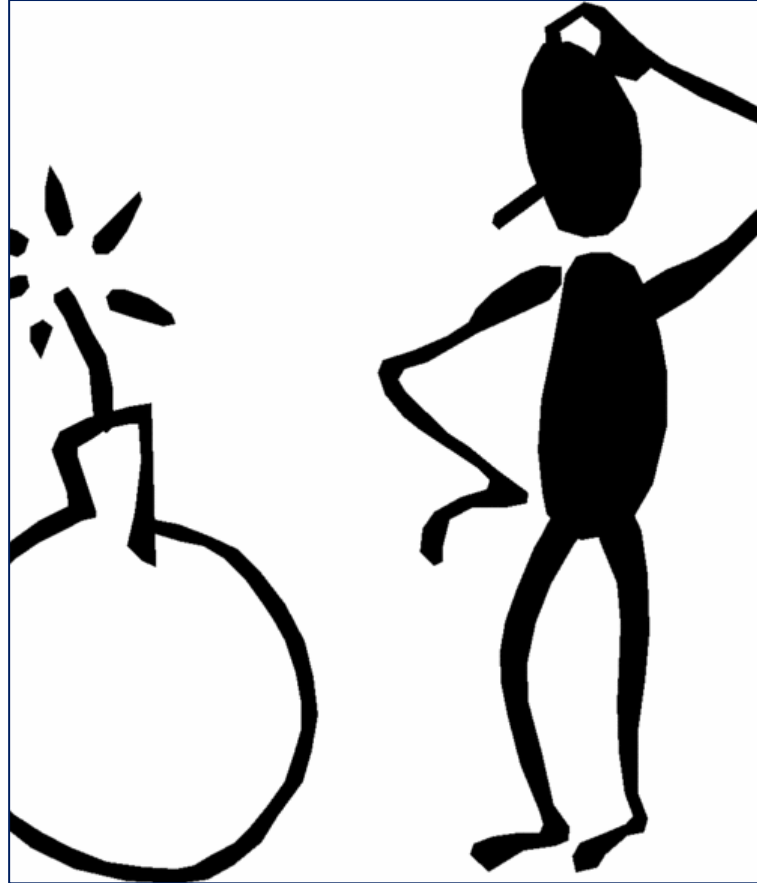


05

Risks



—  
Risks  
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# Risk management

- Analysis
  - No work can start until formal authorization is given and a prior risk analysis has been performed
- Materials:
  - Always accompanied by an inspection label (power, pneumatic, hydraulic equipment)
  - Compliant use
- Hazardous products:
  - To be used only with authorization from the work supervisor (who will have previously checked that the product has been authorized by **ENGIE Electrabel** and will give you the conditions for use)



# Risks



- Trucks and vehicles that require at least a 'C' permit and do not have a backup alarm and/or sensors and/or a reversing camera must be supervised when reversing (including in car parks and at external work sites).



# Risks

- Electricity

- Risk of fatal electric shock for voltages  $> 12\text{ V}$



- Entry prohibited



Equipment  
under 6.3 kV voltage





# Risks

- **Explosive atmospheres (ATEX)**

- Atmosphere that poses an explosion risk due to the (potential) concentration of gas or dust.

- A pictogram provides information about the ATEX zone



# Risks ATEX

- Explosive atmospheres may be triggered by a gaseous or dusty atmosphere.
- Examples of hazardous areas:
  - natural gas: gas substation and gas turbine;
  - battery rooms: H<sub>2</sub>;
  - alternators and storage: H<sub>2</sub>;
  - gas storage;
  - in the area around burners



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# Risks

## Atex Precautions

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- Meticulously follow the instructions of the work supervisor.
- Ask to see the map of ATEX zones, if appropriate.
- Do not make splashes or cause hot spots.
- Use ATEX-certified equipment best suited to the nature of the ATEX zone (e.g. gas or dust).
- Constantly analyze the atmosphere (when working in an ATEX GAS zone).
- When working close to an ATEX zone, use all the protective equipment and screens needed to stop splashes of hot or incandescent material from entering the ATEX zone
- When working in dusty atmospheres, do not suspend dust deposits.



# Risks Biohazard

- Dangerous places:
  - Any place where there is stagnant sludge (sludge in Coo reservoirs, sludge from dams, sludge from cooling systems: condensers, bona, screen rakes, and so on)
- Greater risk when droplets are suspended in the air
  - Use of raw water for high-pressure cleaning
  - Sludge cleaning
- Prevention:
  - PPE: FFP3 mask, impervious gloves, protective overalls
  - Hygiene: wash hands and face before eating, smoking, and so on



# Risks Burns

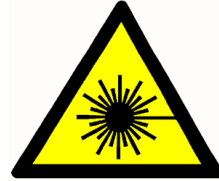
- Dangerous places:
  - Machine room , Boiler, etc.
- Risk of contact with hot, non-insulated pipes
- High-pressure steam escaping



# Risks

## Artificial optical radiation (royal decree of April 22, 2010)

- LASER, infrared rays



— Risk analysis and compliance of proper protective wear with the equipment

- Welding (arc eye, UV)



- Risk to eyes, skin



- Use of tarpaulins obligatory



# Risks

## Electromagnetic fields

- Do not park in the areas covered by these pictograms



- Danger for pregnant women and individuals wearing active implantable devices (e.g. pacemakers)



# Risks

- When heating sediments (muds and residues of raw water), gas is produced.
- **Please note**
  - During welding/oxy-fuel welding on raw water pipes:
    - risk of explosion (production of  $\text{CH}_4$ )
    - risk of anoxia (shortage of oxygen) (due to the presence of  $\text{CH}_4$ /  $\text{CO}_2$ )
    - risk of intoxication ( $\text{CO}$ )



# Risks

## Our life saving rules



Do not perform hot work unless the fire or explosion risks have been eliminated



Verify that there is no live Energy (mechanical, chemical, electrical, fluids under pressure, etc.) before starting work.



Clip on your harness when working at height.



# Risks

## Our life saving rules



Do not walk  
or stand under  
a load.

Only enter a trench if the  
appropriate wall supports  
are in  
place.

Do not drive under the  
Influence of alcohol or  
drugs.



# Risks

## Our life saving rules



Stay out of the path of moving vehicles, plant and equipment.

The atmosphere must be tested safe before entering a confined space and monitored as you work.

Do not handle your phone or any other communication device when driving



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06

Signage

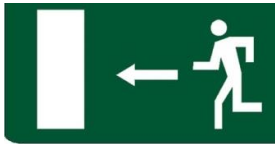


—  
Signage  
Chemical products  
—



# Signage

- Emergency exit



- Suspended loads



- Hand protection required



- General hazard








- Hearing protection required



- Fire hose stations



# Signage

Forms	Colours			
	Red	Blue	Yellow	Green
Round	Interdiction 	Obligation 	-	-
Triangle	-	-	Danger warning 	-
Rectangle / square	Fire fighting 	(Indication)	-	Rescue 



# Signage

## Pipe marking




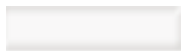
- In the south zone, the statutory color code is applicable.
- Nonetheless, variations may be found and these will be explained on site
- Note:
  - If there are two different fluids within the same thermal insulation, there will be two different marking bands, about 15 cm apart.

Main colours (width = 50 mm)	
<b>Green = Water</b>	<b>Black = Fuel</b>
<b>Red = Steam</b>	<b>Orange or brown = Oil</b>
<b>Yellow = Gas</b>	<b>Purple = Acid or Base</b>
<b>Blue = Air</b>	<b>Brown = Wood dust</b>





# Signage Marking:

Pink		<b>FME signs</b> <b>(delimit a FME (Foreign Material Exclusion)</b> <b>hazard zone:</b> <b>risk of objects migrating into the equipment or system).</b>
Red/ White		<b>Working zone</b> <b>Prohibited or storage zone</b>
Yellow/ Black		<b>Hazardous zone (obstacles, risks of falls)</b> <b>Storage zone</b>
White		<b>White is used to mark the access roads to working</b> <b>areas where electricity is supplied (posts, cabins and</b> <b>premises)</b>



# Signage Marking

- When marking:
  - To be posted at the entry to the work site
  - Duly completed



**ATTENTION**  
**PASSAGE INTERDIT À TOUTE PERSONNE NON-AUTORISÉE**

**RAISON DU BALISAGE**

**CHANTIER DE LA SOCIÉTÉ**

**NOM ET N° GSM DU RESPONSABLE DE LA SOCIÉTÉ SETROUVANT SUR LE CHANTIER**

**NOM ET N° GSM DU CHARGÉ DE TRAVAUX ELECTRABEL**

**Electrabel**  
GDF SUEZ

# Signage Asbestos and RCF:

- Work is prohibited
- Notify the **ENGIE Electrabel** work supervisor
- Removal only by certified companies



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07

Environment

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—  
**Environment**  
—



# Environment

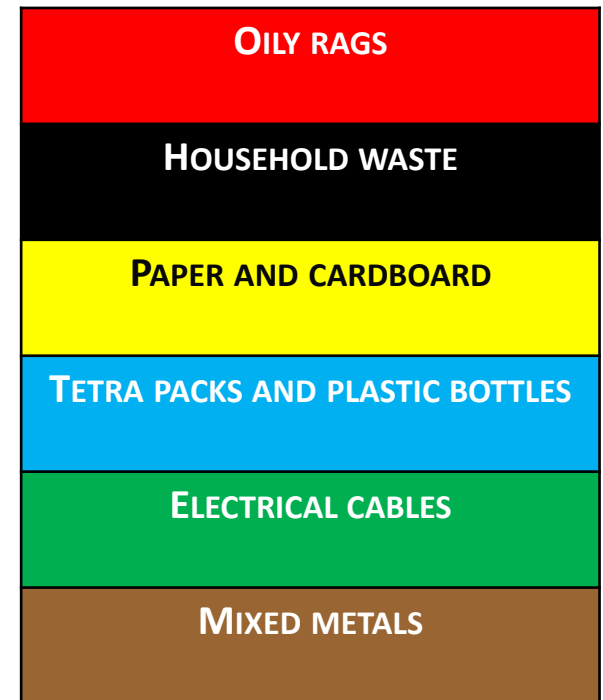
## Zone-wide objectives:

- Continued improvement of our environmental management - ISO 14 001
- Compliance with regulations and legislation
- Limit the environmental impact of our plants
  - Noise
  - Discharges into the air, soil and water
  - Sorting and reducing our waste
- Everyone is involved for the good of the environment



# Environment

## In-plant waste sorting compliance with South zone colour codes



# Environment

## WASTE storage spaces:

- Container depot: **SORT waste according to instructions**

= > Storage areas present at each site



**16 05 04**  
**AÉROSOLS**



 <b>AUTORISÉS</b>	 <b>INTERDITS</b>
<ul style="list-style-type: none"><li>• les aérosols de peinture</li><li>• les aérosols d'huile, de déca-teint</li><li>• les aérosols désodorants</li><li>• les extincteurs pleins y compris Halon</li></ul>	<ul style="list-style-type: none"><li>• les pots de peinture</li><li>• les bombettes de gaz</li><li>• les cartouches de camping gaz</li></ul>

**17 06 04**  
**ISOLANTS**



 <b>AUTORISÉS</b>	 <b>INTERDITS</b>
<ul style="list-style-type: none"><li>• les calorifuges sans amiante, laine de roche, laine de verre, Epagite sans substance dangereuse</li></ul>	<ul style="list-style-type: none"><li>• amiante</li><li>• matériaux d'isolation contenant des substances dangereuses</li></ul>





# Environment

## Regarding environmental proactiveness:

- Use the spill containment systems available from → maintenance
- Prevent seepage into the soil, drains or water through the use of preventive equipment available in the warehouse.
- Do not pour any products down the drain.
- Products hazardous to the environment (R51 or H400 to H413) may not be used unless prior approval (SHEP) is given by **ENGIE Electrabel** and they are registered in the ELECTRABEL CHEMICAL MANAGEMENT SYSTEM (CMS)  
(See your work supervisor)



# Environment

## Pollution control kit:

**UNE FUITE,  
UN ÉCOULEMENT SUSPECT ?**

**UTILISEZ LE KIT ANTI-POLLUTION**

**CONTENU**



**3 x 10 kg**  
de oildry  
absorbant

**1 obturateur d'égout**  
réutilisable  
90 x 90 cm



**100 feuilles MRO 100**



**12 boudins absorbants**  
d'hydrocarbures



**& 3 paires de lunettes**  
**3 paires de gants**  
NEOSTAR

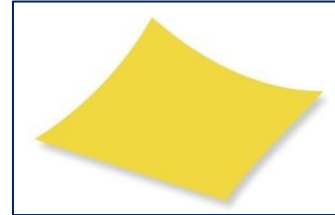


**Electrabel**  
GDF SUEZ

# Environment

## In the event of a liquid spill:

- Call **4444**
- Use pollution control kits
- Notify your work supervisor for the environmental anomaly report and the restocking of pollution control kits
- Prevent seepage into the soil and sewers using the protective equipment available in the kit
  - Drain cap
  - Absorbent material
  - And so on



# Environment Site clean-up:

Once you have finished your work, do not forget to clean and tidy your space:

- Take your waste to the sorting center
- Tidy your spill containment area
- Organize materials
- Clean the work site





Thank you

