

Electrabel

GDF SUEZ





Welcome to the SOUTH

Conventional Generation Zone



GENERAL RULES

General rules

Emergencies
Authorisations
PPE
Risks
Signage
Environment

- Ensuring individual health and safety
- Respecting the environment



GENERAL RULES

Prohibitions and restrictions:

- ❑ No alcohol
- ❑ No drugs
- ❑ Smoking => 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

- ❑ 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.





GENERAL RULES

Living spaces:

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





EMERGENCY RESPONSE

- General rules
- Emergencies**
- Authorisations
- PPE
- Risks
- Signage
- Environment



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 Electrabel FRT/first aid worker - no action required; listen for audio instructions

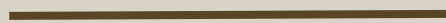


- Evacuation (alarm)

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 authorised 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 Electrabel manager (in charge of work)
- Possible support from the onsite 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)



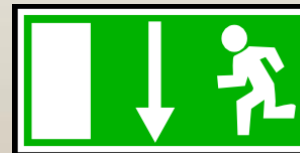
EVACUATION

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



EMERGENCY RESPONSE

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

In the event of an incident involving chemical products:

- Use the nearest showers and eye wash stations
- SPS (Self-contained Portable Showers) available





AUTHORISATIONS

- General rules
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- Environment





AUTHORISATIONS

Start and end of work

Objective: joint exchange of information between companies and Electrabel

Electrabel → Third party: what are the risks inherent to our site?

Third party → Electrabel: what are the risks introduced by your involvement?

Outcome:
preventive measures to be taken

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 des documents:

- Plan Sécurité, santé et environnement à rédiger et valider
- Analyse de risque de chantier
- Forma MDS/SSG
- Prendre en compte par les prestataires du "Règlement environnement" et du règlement spécifique de la site
- Signature des annexes IA / B / 10

C'est seulement après la réalisation de ces premières étapes

Compléter et signer l'ouverture de chantier

LMRA à compléter sur le chantier

A joindre à la DC document bleu

Electrabel Document d'ouverture de chantier
de la loi du 04 août 1996

Sib: _____ Entreprise extérieure: _____ Date de début: ____/____/____

On des command: _____ Nature des travaux: _____

GSM chargé des travaux EBL: _____ GSM chargé des travaux prestataire: _____

Risques encourus par les agents de l'entreprise extérieure de ses installations ELECTRABEL en ses chantiers.

1. Travaux en hauteur
2. Travaux superposés
3. Appareil de levage et de manutention
4. Chute d'objets
5. Ouverture dans le sol
6. Incendie
7. Encombrement des aires de circulation
8. Projet de matière incandescente
9. Brul
10. Produit dangereux
11. Chocs
12. Démarrage collective
13. Démarrage cabinebot
14. Chocs
15. Manutention
16. Contour géométrique
17. Serpage
18. Poulie
19. Autres risques

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

1. Travaux en hauteur
2. Travaux superposés
3. Appareil de levage et de manutention
4. Chute d'objets
5. Ouverture dans le sol
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19. Autres risques

Mesures de protection à charge de l'entreprise extérieure

Sécurité

1. Protections auxiliaires
2. Procédure de consignation
3. Démarrage de la zone de travail
4. Barrière ouverture
5. Rapport de vote de chaque agent de levage et de manutention
6. Protection électrique au 24V ou TBS
7. Protection de objets de abords
8. Filet de protection ou autres
9. Balisage zone de travail
10. Filet de protection ou autres
11. Filet de protection (sécurité)
12. Protection travaux en hauteur (filets, bannes, etc)
13. Filet de protection ou autres
14. Barrière chute de pièce dans les équipements (PME)
15. Autre mesure

Mesures de protection à charge d'ELECTRABEL

1. Démarrages autorisés - réception
2. Procédure de consignation
3. Démarrage de la zone de travail
4. Barrière ouverture
5. Rapport de vote de chaque agent de levage et de manutention
6. Protection électrique au 24V ou TBS
7. Protection de objets de abords
8. Filet de protection ou autres
9. Balisage zone de travail
10. Filet de protection ou autres
11. Filet de protection (sécurité)
12. Protection travaux en hauteur (filets, bannes, etc)
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15. Autre mesure

Parti chantier compléter le document de clôture de chantier

Communication
Règlement général de sécurité pour entrepreneurs lors de réduction des travaux
Consignes de sécurité en vigueur à la centrale disponible sur: <http://www.electrabel.com/interactions/interactions/interactions.aspx>

Observations diverses et risques résiduels:

Réaliser la LMRA sur chantier

Electrabel Nom et signature _____ Entreprise extérieure Nom et signature _____

Fait le: ____/____/____

Fait le: ____/____/____

SPILUSTOP: Analyse de risque sécurité

Risques ATEX: _____

Autres travaux en cours dans la zone de travail: _____

Equipements sociaux: Il est demandé qu'ELECTRABEL mette à disposition de l'entreprise extérieure les équipements sociaux suivants: _____

Vestiaires et douches: _____

Réfectoire: _____



AUTHORISATIONS

Work authorisation:

- ❑ Required document
- ❑ Issued by the plant manager
- ❑ Received by the person in charge of the work (usually a person from 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 organisation.
- ❑ Only trained individuals may use scaffolding

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





AUTHORISATIONS

"Fire" Permit:

- This permit (initially issued with the work authorisation) 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.





AUTHORISATIONS

"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 "Electrabel confined space" procedure:

- ❑ Enclosed space
- ❑ Difficult access
- ❑ Potentially hazardous atmosphere
- ❑ Guarding of the area is required
- ❑ Measurement of oxygen and toxic or asphyxiant 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 $U < 30 \text{ VDC}$).





AUTHORISATIONS

Electrical equipment (live):

- Unauthorised access is strictly prohibited





AUTHORISATIONS

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.



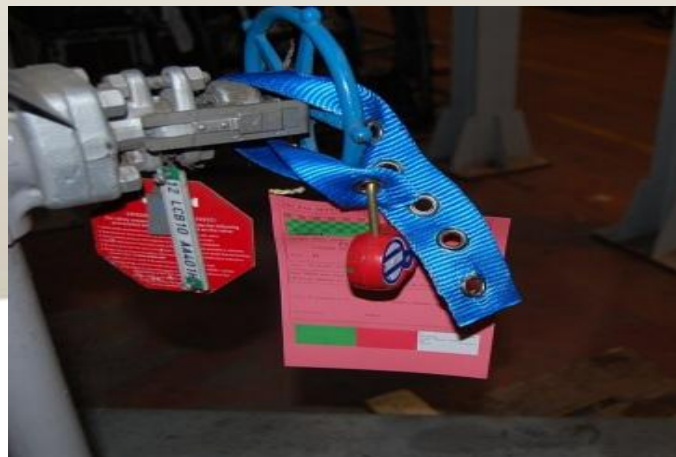


AUTHORISATIONS

Machine lockout-tagout

Work cannot commence until authorisation has been received from the plant manager (Electrabel), who issues this authorisation 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.





AUTHORISATIONS

The foreman: your contact

- Will provide you with the necessary authorisations 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 colour 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

CODE COULEUR MARQUAGE	2013	Blue	
	2014	Purple	
	2015	Grey	
	2016	Yellow	
	2017	Green	
	2018	Blue	





PERSONAL PROTECTIVE EQUIPMENT

- General rules
- Emergencies
- Authorisations
- PPE**
- Risks
- Signage
- Environment





PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE):

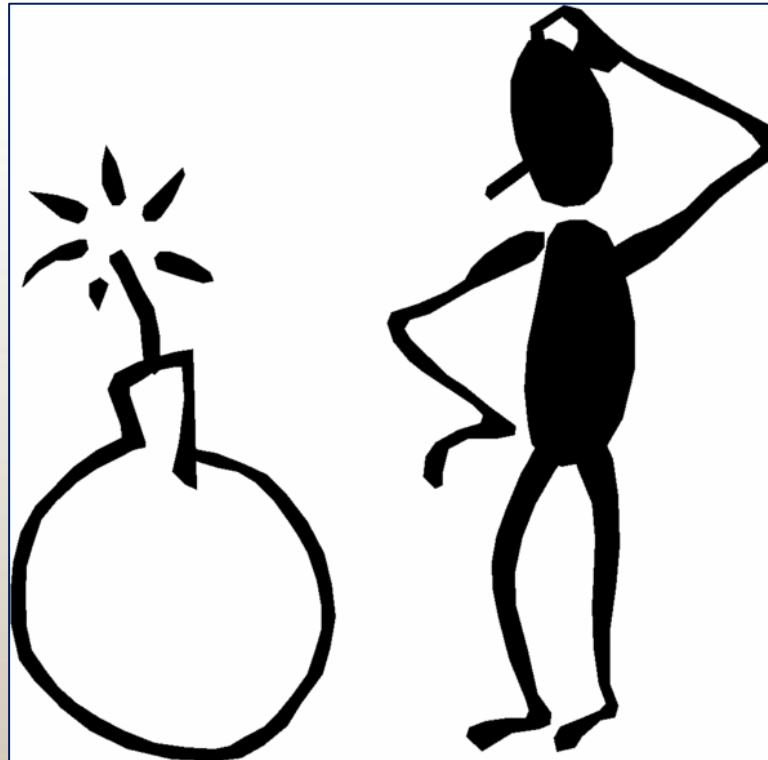
- Mandatory in all technical facilities: helmet, safety glasses and safety boots
- + job-specific protection equipment (based on your risk analyses)
Example: hearing protection devices, gloves, respiratory mask, face visor, and so on).
- Please note: if appropriate scaffolding is not available, you must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





RISKS

- General rules
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RISK MANAGEMENT

General rules
Emergencies
Authorisations
PPE
Risks
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Environment

Analysis

No work can start until formal authorisation 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 authorisation from the work supervisor (who will have previously checked that the product has been authorised by Electrabel and will give you the conditions for use)

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

Explosive atmospheres may be triggered by a gaseous or dusty atmosphere.

Examples of hazardous areas:

- natural gas: gas substation and gas turbine;
- battery rooms: H₂;
- alternators and storage: H₂;
- gas storage;
- in the area around burners (gas, pellets, etc.);
- unloading areas for pellets, and conveyor belts.



ATEX PRECAUTIONS

- 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 analyse 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.





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





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 CH₄)
- risk of anoxia (shortage of oxygen) (due to the presence of CH₄/CO₂)
- risk of intoxication (CO)



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.



Do not walk or stand under a load.



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



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



Do not drive under the Influence of alcohol or drugs.



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



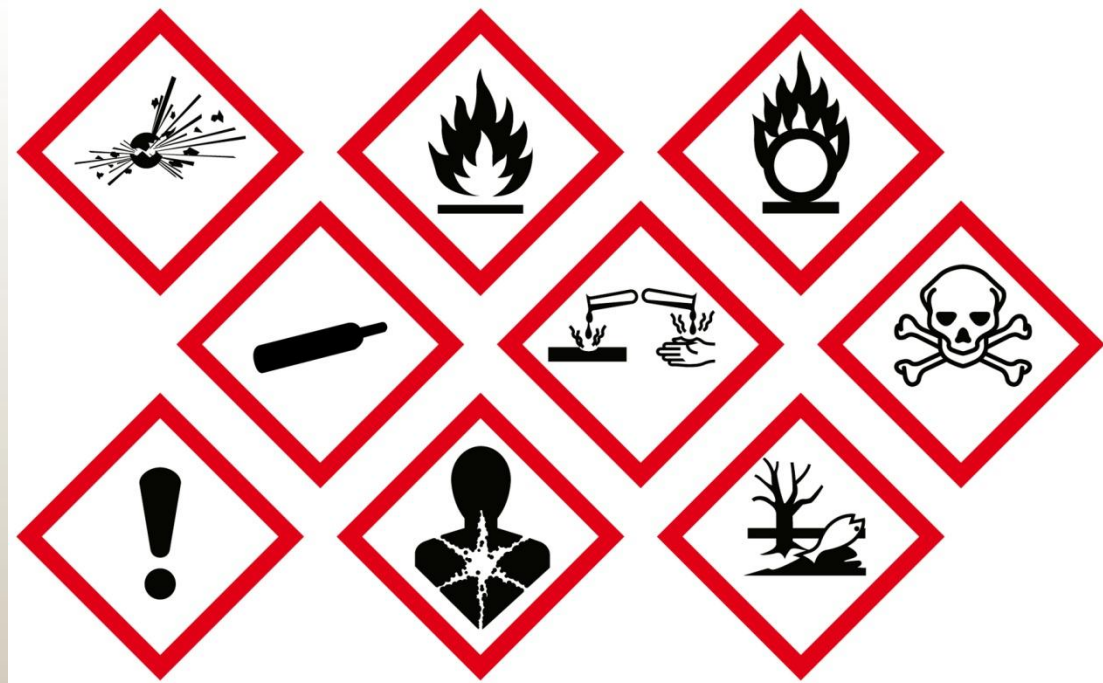
Do not handle your phone or any other communication device when driving



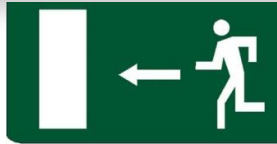
SIGNAGE

- General rules
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Chemical products



SIGNAGE



Emergency exit



General hazard



Suspended loads








Hearing protection
required



Hand protection
required



Fire hose stations

Formes	Couleurs			
	Rouge	Bleu	Jaune	Vert
Rond	Interdiction 	Obligation 	-	-
Triangle	-	-	Avertissement de danger 	-
Rectangle / Carré	Lutte contre l'incendie 	(Indication)	-	Sauvetage ou secours 

SIGNAGE

Pipe marking

In the south zone, the statutory colour code is applicable. Nonetheless, variations may be found and these will be explained on site.

Note:




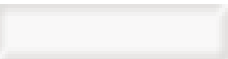
If there are two different fluids within the same thermal insulation, there will be two different marking bands, about 15 cm apart.

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



SIGNAGE

Marking:

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



SIGNAGE

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



SIGNAGE

Asbestos and RCF:

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





ENVIRONMENT

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ENVIRONMENT

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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














OILY RAGS
HOUSEHOLD WASTE
PAPER AND CARDBOARD
TETRA PACKS AND PLASTIC BOTTLES
ELECTRICAL CABLES
MIXED METALS



ENVIRONMENT

If you are unsure where waste should go: contact your work supervisor or the Green Men

Un doute sur la destination ou le tri d'un déchet ?

Les Messieurs Verts	Awirs	Coo & Hydro	Amercoeur	Saint Ghislain	
	<p>Patrick Lerho 0473 / 78 21 38</p>  <p>Suppléant: Pierre Siraut 0494 / 86 06 11</p> 	<p>Christian Dumont 080 / 89 28 15 (94.2815)</p> 	<p>Jacky Lambert 0475 / 37 06 60</p>  <p>Suppléant Manuel Recuero - Doral 0473 / 88 05 15</p> 	<p>Didier Durant 065 / 76 12 43 (94.4243)</p>  <p>Suppléant Bernard Hecq 065 / 76 12 51</p> 	
	Les adjoints Environnement	Liège-Luxembourg	Hainaut-Namur		
		<p>Jean-Louis Vandermeulen 0473 / 83 51 88</p>  <p>Sarah Palante 0475 / 62 47 33</p> 	<p>Fabrice Minsart 0473 / 46 62 50</p> 		
Messieurs Verts					



ENVIRONMENT

WASTE storage spaces:

- Container depot: **SORT waste according to instructions**
- = > Storage areas present at each site



16 05 04
AÉROSOLS



AUTORISÉS	INTERDITS
<ul style="list-style-type: none"> les aérosols de peinture les aérosols d'huile, de diluant tout les aérosols désodorisants les extincteurs pleins y compris Halon 	<ul style="list-style-type: none"> les pots de peinture les bombes de gaz les cartouches de camping gaz

17 06 04
ISOLANTS



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





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 ELECTRABEL and they are registered in the ELECTRABEL CHEMICAL MANAGEMENT SYSTEM (CMS)

(See your work supervisor)





ENVIRONNEMENT

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

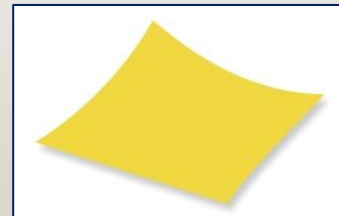




ENVIRONMENT

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 centre**
- **Tidy your spill containment area**
- **Organise materials**
- **Clean the work site**



Electrabel

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