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WORK PERMITS

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1. **SUBJECT**

Work permits.

2. **OBJECTIVE**

This instruction defines a method and a format for formal communication between the various parties involved in the execution of work on Ineos NV sites.

This method must ensure the clear, sufficient and correct information exchange among the parties so that, before, in the course of and at the end of the work, the safety of the personnel and the installations is guaranteed at all times.

For this purpose there are 3 work permits at our disposition:

- Permit for 'A'-work: [PAW] work that involves major risk (red).
- Permit for 'B'-work: [PBW] work that involves a certain amount of risk (yellow).
- Permit for 'C'-work: [PCW] work with negligible/minimum risk (green)

These documents are available in the warehouse under the numbers 139.077 (PAW), 139.078 (PBW) and 139.313 (PCW); for the sake of clarity, the various sectors are referred to as follows: 'Section 1' on an 'A' permit is referred to in the text as 'Section (permit) A1'.

3. **DEFINITIONS**

1. Hazardous zone (D).
2. Hazardous products (D).
3. Operation (D).
4. Performer (D).
5. Deputy (D).
6. Fire Department (D).
7. Safety Officer (D).
8. Construction sites (D).

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9. Work with high temperatures (D).
10. Registered deputy (for precautionary measures in the preparation of permits) (D)
11. Cold cuts (D)

4. WHICH PERMITS ARE REQUIRED?

The type of permit necessary for the execution of a specific activity is determined by:

- The nature of the work
- the place where the work is executed
- the person executing the work.

In the next 2 charts, the general guidelines are given that determine the classification depending on the abovementioned factors. The first chart refers to work performed by day personnel, the second one to work performed by shift personnel.

For specific frequent activities, the compulsory permits will be specified in paragraphs 4.1 through 4.4.

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WORK EXECUTED BY DAY PERSONNEL

	ENVIRONMENT	
	1	2
MINIMUM RISK	PCW	EXEMPTED
WORK INVOLVING A DEGREE OF RISK	PBW	PBW
HIGH RISK	PAW	PAW/PBW

1. Hazardous zone and/or use of hazardous product and/or a hazardous work condition (pressure, temperature, etc).
2. Non hazardous zone (see point 4.5 -a) and free of hazardous substances or conditions (pressure, temperature, etc).

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WORK EXECUTED BY SHIFT PERSONNEL

		ENVIRONMENT	
		1	2
MINIMUM RISK		EXEMPTED	EXEMPTED
WORK INVOLVING A DEGREE OF RISK	OUTSIDE OWN SECTION (NOT TOGETHER WITH SOMEONE FROM THE SECTION)	PBW	PBW
	IN OWN SECTION THOUGH GOING BEYOND SHIFT	EXEMPTED THOUGH RED TAGS ARE COMPULSORY	EXEMPTED THOUGH RED TAGS ARE COMPULSORY
	INSIDE SHIFT - In own section - Outside own section but together with someone from the section	EXEMPTED	EXEMPTED
HIGH RISK		PAW	PAW/PBW

1. Hazardous zone and/or use of hazardous product and/or a hazardous work condition (pressure, temperature, etc).
2. Non hazardous zone (see point 4.5 -a) and free of hazardous substances or conditions (pressure, temperature, etc).

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4.1. A permit for 'A' type work is required for the following:

- 4.1.1. Every time the equipment is entered (D), even if only by Operations.
- 4.1.2. High temperature work (D) in a hazardous zone (D)
- 4.1.3. With some electrical work:
Isolation work on electrical equipment under high voltage (see safety procedures electrical net L--9-099-00). This is work on parts that are under high voltage, or in the neighbourhood thereof, where isolating protection must be used.
- 4.1.4. With performing branching off in lines under pressure ("**hot tapping**").
- 4.1.5. When special tests (See section A8) have to be performed.
- 4.1.6. Use of **ALL** closed shelters especially shelters used in removing asbestos around tank equipment.
- 4.1.7. Other work, whereby Operations or Engineering judge that they belong to the same hazard category as the abovementioned work.
- 4.1.8. Groundwork deeper than 1.2 m (see FSR 4.5)

4.2. A permit for 'B'-work is required for the following work:

- 4.2.1. Breaking of lines or opening equipment by day personnel.
- 4.2.2. High pressure cleaning, whereby the maximum working pressure can be higher than 200 bar.
- 4.2.3. Driving in non-explosive secure vehicles in hazardous zones as well as driving on roads that are normally closed to traffic, except for lift trucks or trailers used by Operations in their own section. The use of a continuous gas gauge is still required.
- 4.2.4. Use of non-explosive safe sources of energy or engines in hazardous zones provided that they are not included in the specifications in paragraph 4.4.

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- 4.2.5. In work whereby removal of lids, gratings or rails is necessary, thus creating a hazardous situation. See OV-4-513.
- 4.2.6. Work whereby asbestos can be released.
- 4.2.7. Work at heights (more than 2 meters), except where permanent platforms and/or approved scaffoldings are present. Work on roofs and above water.
- 4.2.8. Groundwork in depths of less than 1.2 m. (see FSR 4.5)
- 4.2.9. a) All electrical work not mentioned in sections. 4.1.3. and 4.3.2),
b) Replacement of lamps under pressure in a hazardous zone (continuous tests are required).
c) Performing measurements on pressurized electrical circuits of safety systems whereby the current must be temporarily interrupted in order to build in auxiliary apparatus.
- 4.2.10. High temperature work in non hazardous zones.
- 4.2.11. Modification work on instruments belonging to a unit that is operating.
- 4.2.12. Work involving radioactivity.
- 4.2.13. Dangerous lifting work (eg. Working with a crane or such like under power lines, etc.).
Lifting work in the neighbourhood of a 150 kV station should be reported to the high voltage authority of Essent. Depending on the kind of lifting work and the exact distance to the installation, the responsible person will determine which safety measures should be taken.

It is forbidden, in any case, to exceed the vertical elevation with the boom of the lifting apparatus in the neighbourhood of the station.

If this risk exists even then, for example by turning the boom incorrectly, a detailed lifting plan must be drafted and presented to the person responsible for the installation; then there is a need for supervision on the lifting work by an observer who has a permanent contact with the crane operator.

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Activities with lifting or handling apparatus (e.g. forklifts) that are not allowed to go beyond the area of the station enclosure without permission, do not need special precautions.

- 4.2.14. Placing of “kelfs” according to FSR 50
- 4.2.15. Executing sand blasting work outside the proper premises.
- 4.2.16. Use of vacuum trucks.
- 4.2.17. Work on interlock and ESD-connected instrumentation of working units.
- 4.2.18. Other work considered by Operations and Engineering as belonging to the same hazard category as the work mentioned above.
- 4.2.19. Building of shelters for the removal of asbestos, after all installations to be enclosed in such shelters have been emptied and rinsed, degassed and ventilated as well as separated physically from the rest of the installation outside the shelter space. The main hazard chart wherein the safety of this equipment is registered, is reported on the PBW for the building of the asbestos shelter. Such PBW can be used until the smoke tests for the shelter are performed.
As soon as the tarpaulins are placed, the space around which the shelter is built will be secured/guarded by an oxygen tester and a safety officer. The safety officer will evacuate the shelter should the alarm of the oxygen tester go off.

4.3. A permit for ‘C’-type work is required for the following work

- 4.3.1. Work without any major hazard, without safe-making by means of main hazard chart, and not mentioned in points 4.1. and 4.2.
- 4.3.2. Replacing low voltage lamps in a hazardous zone and work on a free-standing (that is, not connected to the net) power switch in a distribution point.
- 4.3.3. Changing oil in pumps and gear casings (provided it is obligatory for whoever is executing this work to turn off the local switch and lock it).

4.4. The following work can be performed after verbal notice to, and permission from, Operations (or the panel operator)

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- Preventive and predictive inspections (vibration measurements, density measurements, taking photographs, etc), routine operations on analyzers and instrumentation and diagnostics of electrical problems.
If, when performing these operations, the use of non explosion-proof measuring or simulation apparatus is needed, or if explosion-proof equipment has to be opened, this must be done under protection of a continuous flammable gas tester; an intrinsically secure system that meets the norms EExia or EExib which allows for opening without using a flammable gas tester.
- Work on software of the DCS system. Communication with the panel operator and Operations is required!
- Replacing lamps in non-hazardous zones

The outside-operator of the section in question will be informed immediately about this work by the panel operator.

4.5. Permit exemptions

- 4.5.1. Work in construction zones and in maintenance work sites, if no prevention measures or safety measures are required. The parking east from the maintenance site is also a permit-free zone.
- 4.5.2. Shift personnel are exempted from the use of PBW's on one of the following conditions:
 - The work is done inside own shift time AND in own section.
 - The work is done inside own shift time, but outside own section although together with someone from the section.
 - The work is done inside own section but not in own shift time. In this last case, tags are required.

4.6. Remarks

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- 4.6.1. In case of doubt, or if special measures have to be taken, a permit of a higher category can be used.
- 4.6.2. Work performed by 2 Engineering people and/or contractors can be reported on one permit providing that the safety measures are the same. The safety measures, special tests and instructions should then be applied by all disciplines (engineers, contractors).
- 4.6.3. A permit for 'A'-work can be used to also cover work of the 'B'- and 'C'-categories at the same time but it is not advisable for practical reasons (see GWP-2-002 par. 3.5.3)
- A permit for 'B'-work can be used to also cover work of the 'C'-category at the same time.
- 4.6.4. 'A'-work for work with high temperatures whereby it is not possible, after safe-making of the premises, to perform a representative random test for flammable gas, should be treated beforehand like 'B'-work for cold cutting in a high temperature.

5. PREPARATION OF A PERMIT

5.1. Introduction

As a rule, permits are made up by the maintenance coordinator of the department, after consultation with Engineering in the daily planning meeting. Well documented permits are then handed over and discussed with the shifts that carry them out and confirm the necessary safety measures of the installations. These safety measures are taken, whenever possible, preferably during the late shift. After completion of these and confirmation thereof on the permit, the permits are made ready for execution.

'A'-work is work that can involve a great deal of risk, life threatening to the workers, catastrophic for installations or the environment. The preparation of such permits requires a great deal of care on the part of whoever compiles them and excellent communication among all the parties involved. This preparation work must be done very thoroughly. There must be a physical control on the correct action of the planned work, the safety measures and the preventive measures.

'A'-permits are therefore still signed by Engineering (Section A11) and thereafter by Operations (Section A12) before the work can start.

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'B'-work, although involving risk, does not have the same high degree.

This work, just like 'A'-work, is thoroughly prepared and previously discussed between Operations and Engineering.

Meeting the requirements can be left to the operator though, without the need of an additional check-up. He will then sign all checked safety measures in Section B6 after a full and correct execution. See explanation on the subject in GWP-9-002, par. 3.14

The outside-operator fills out Section B9a when the execution of every requirement to which the safety measures refer, by recognizable initials and a short signature. When one or more of the requirements in B6 are signed by others, he does not need to check them up additionally.

In case that no safety measures are required by Operations, Section B9a can also be filled out by the panel operator. He does this only after the outside-operator has confirmed that the environment where the work will take place allows for a safe execution.

After execution of the imposed safety measures are confirmed in Section B7 with recognizable initials and a shortened signature, Engineering fills out Section B9b and confirms thereby to have understood all dangers connected with the work and has noted all imposed safety measures.

As soon as Sections B9a and B9b are completed, the execution of the work can start.

'C'-work is that which does not involve appreciable risk. The only control is whether the environment where it will be performed allows for a safe execution. This is done by the outside-operator, who verbally gives confirmation thereof to the panel operator. In such case, the panel operator fills out the 'C'-permit for a final approval in Section C5.

5.2. Specific preparation for each permit type

5.2.1. Permits 'A' and 'B'

5.2.1.1. Application

The application is done by filling out the sections A1/B1 through A9/B8 of the work permit form.

The application form is filled out only after thorough deliberation between Operations and Engineering. During these deliberations Operations must

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explain exhaustively to Engineering all hazards involved in the work in question.

Engineering must take care that all these hazards are fully understood. Engineering must then inform Operations of all the potential hazardous tools to be used and the safety measures involved.

Depending on the kind of work to be performed, a preliminary visit to the work site may be necessary.

While applying for a work permit it should be taken into consideration that enough time be allowed for the taking of safety measures.

It is possible to apply for permits for general work such as scaffold building, paint work and insulation work.

This is not possible on some locations that represent specific risks: these are specified for every section and are listed in attachment no.1 of the pertinent regulation.

The day-coordinator of the unit (or his replacement) must always be informed about the work that is performed in his unit. He decides whether a specific work should be performed under the regulations of a specific permit or whether there is need for a specific permit for that work (e.g. in hazardous zones as in the neighbourhood of compressors, with specific risks like isolation of a line with a product that can block, etc ...).

Therefore all scaffolding, insulation or paint work must be discussed beforehand with the day-coordinator so that he can make the above mentioned choice in advance (be it a general or a specific permit).

The general permits must be available with the foreman of the contractor (and thus not on the work site).

5.2.1.2. Defining requirements.

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Operations are responsible for the accuracy in the determination of the conditions to be fulfilled before allowing a permit, and are specified in sections A4/B4 through A9/B8.

For 'A'-permits and for complex safety measures, the one who is in charge is the person who signs Section A1/B1 and which contains the necessary details for the safety measures (contingency plans, rinse procedures, cut sites, etc.) added to an annex to the permit. The person responsible for the implementation of the safety measures **MUST** be specified.

Documents such as the P&CD summaries, clear sketches, digital photographs, pre-printed lists with stopcocks that can be manipulated/handled, TDC bypasses etc., can be of used here. The number of all annexures is mentioned in Section A6/B6.

For access and for high temperature, this info will be included in a file which, during the whole process of the work, will be subject to inspection/info for the sake for Operations.

The form and contents of these files are specified in attachments 2 and 3 of GWP-9-003.

Operations then fills in Section A1/B1 in "**Permit made up by**".

A permit for 'A'-work should be signed off in section A1 "**Permission drawn by**" signed by someone who is admitted in the A-register.

A permit for 'B'-work must be signed in the Section B1 by someone who is included in the A- or B-register.

5.2.1.3. Meeting requirements

Meeting requirements for safety measures has, as a starting point, a good understanding of the "work to be done" part in A3 of B3. With each doubt or uncertainty, deliberations should be made **first and foremost** (FM, draftsman, engineer)

In accordance with the requirements of the work permit, both Operations and Engineering look after the proper preparation of the work zone.

Engineering must ensure that all safety measures, as required in the work permit, are taken to the work site and must ensure the proper maintenance of these while in use.

When the job in question is moved, the safety measures must move along.

This must be discussed beforehand with the day-coordinator. When issuing a permit on a day basis, it must be specified how the job is supposed to

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evolve and whether Operations will confirm/specify the proper safety measures.

Each person meeting the requirements will place their initials and short-signature in the proper space.

Note: only employees with full capacity are authorized to execute the requirements; trainee operators may NOT sign these requirements.

If the person in charge of drawing up section A6 ticks the item "prepared with PBW no..." , this will mean that this 'B'-permit is a part of the safety measures needed for 'A'-work. Signing up of "prepared with PBW no.." in section A6 can only be done by Operations **after** the 'B'-permit is signed off by Engineering in Section B10 for "end of work".

The job description in Section B3 may not, in this case, be used again for the 'B'-permit after work using the 'A'-permit (e.g. closing of equipment, joining ducts, drawing pans, etc.)

More information is given on the subject in GWP-9-002, par. 3.5.

If, while preparing the permits, it turns out that the draftsman/organizer has set redundant or impractical requirements in what safety measures or safety in general refers, the Operations foreman (in case of safety) or Engineering (in case of safety measures) will contact the organizer (or Operations) and discuss the problem. When it is decided to drop the requirements, then the Operations foreman, resp. Engineering provide these with n/a (not applicable) and sign off these personally with name and initials. This decision will be entered in the section 'special instructions' B8 or A9.

5.2.1.4. Issuing the permit.

The supervisor of each of the involved contractors will place their names and sign the permit for acknowledgement and understanding in Section A10/B9b. There is space available for a maximum of 2 different companies.

Engineering is responsible for the following:

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- That the imposed safety measures are complied with.
- That they are understood by the executing personnel.
- Ensuring the fire department are fully informed of their duties, of the environment where they are posted and the measures to be taken in case they have to sound the alarm.
- In the case of an 'A'-permit, this would be checked on site by Engineering and Operations.
- Then, Engineering fill out the permit for agreement in Section A11/B9b. there is space for a maximum of 2 Engineering teams.

Operations confirms that the safety measures are implemented correctly, that any special tests (Section 8) are executed with the desired results (see FSR 4.4 par. 5.2) and that the environment in which the work is to be performed allows for safe implementation.

In the case of 'A'-permits, these safety measures and their correct implementation are controlled at the site by Operations before Section A12 is filled out or before the permit is extended (see Section A14 on the reverse). This confirmation can only be given by someone of the B-register.

For access and high temperature work, this control by Operations would mean at least a physical check-up on the correct positioning and quantity of the physical partitions (panels/blind flanges/uncouplings) as well as an administrative check-up of the main hazard chart (e.g. checking if there have been any tags cancelled) and of the files on access and high temperature work.

In the case of 'B' permits, this is done by filling out Section B9a by an operator (see par. 5.1).

For 'B'-permits to systems that exceed their section, the confirmation of a correct application of safety measures is given by the General Foreman who fills out Section B9a in this specific case.

Should Engineering and Operations belong to the same division, Section A11 /B9a must be filled out by a different person than one belonging to Section A12/B9b (unless both are filled out by the general foreman)

- The person, who signs on behalf of Operations in Section A1 and A12 for the PAW, cannot ever be the same person.
- The person who signs for Operations in Sections B1 and B9a for a PBW, will preferably NOT be the same person.

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For 'A'-permits it is of utmost importance that Sections A10, A11 and A12 are filled out in that precise order. Section A11 can only be signed AFTER all safety measures defined in Section A7 are formally confirmed with legible initials and short signature.

IMPORTANT NOTICE:

Operations will take it upon themselves that each important change to the condition of the site is checked out with reference to the (temporary) permits that must be cancelled. Therefore, work-in-progress must be taken into consideration as well as the permits that are being prepared by Operations, although this work may not yet have started.

5.2.2 'C' permits

5.2.2.1. Applying.

Applying is done by filling out the PCW document. Also, whoever signs the permit for release in Section C5 must be informed accordingly and in detail.

Section "remarks"

Agreements between Operations and Engineering to promote a fast execution of the work, can be written down here *pro memorie*.

5.2.2.2. Issuing a permit.

When the panel-operator has made sure through the outside-operator that the environment where the work is to take place allow for a secure execution of these he will sign in Section C5 "**For final approval**".

Important notice: Operations will assure that, whenever there is an important change to the condition of the site, there is an investigation as to the type of (temporary) permits that have to be cancelled. Hereby we must not only take into

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consideration the work that is already being executed but also the permits that are being prepared by Operations, although the work may not have started yet.

6. DISTRIBUTION OF WORK PERMITS

NOTE:

Engineering collects the prepared permits at Operations. PBW's and PCW's are to be found in a sorting system which varies depending on location; PAW's must always be requested from the Foreman, because he visits the site most frequently for release or extension.

In all cases Engineering will leave a copy of the work permit with Operations and will take the original to the work site. The file in case will remain in possession of Operations for access and the work itself, all through the duration of said work for the sake of information and control.

- 6.1. The original copy of the permit must be available at the work site before the work begins and during the execution thereof.
For A-work it must also be visible (in a plastic holder).
- 6.2. The original copy must be given back to Operations:
 - In case of timely suspension of the work permit at the request of Operations
 - At the end of each task day, unless there is a FSR 1.7 deviation (e.g. in shutdowns)
 - At the end of the work.
 - At the end of the term.
- 6.3. While the work is being executed, the copy will be available for perusal in the office of the foreman in charge. After the end of the work, both copies must be filed with Operations for a period of three months.

7. START OF WORK – POSSIBLE INTERRUPTIONS/ RESTARTING

- 7.1. The work can only start AFTER the permit has been signed for final approval
 - see section A12 for 'A' permits
 - see sections B9a and B9b for 'B' permits
 - see section C5 for 'C' permits.

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- 7.2. Work must be stopped immediately when an unsafe situation occurs or is reported (e.g. factory fire alarm), or otherwise on request from Operations, the deputy, fire department or safety officer. This would imply a temporary suspension of the permit. Whoever stops the work will report his name and function to Engineering and will present the original copy of the permit to Operations. In case of fire alarm, all 'A'-permits will be presented to Operations; this also goes for B-permits in the unit where the fire alarm has been activated.
- 7.3. After a temporary suspension of the permit, work can only be resumed after the permit had been handed back over to Engineering.
- 7.4. After collective temporary suspension of permits, the following agreement will be in force:

After fire alarm:

All 'A'-permits have to be re-issued by Operations

'B'- and 'C'-permits must be re-issued in the department where the incident took place
'B'- and 'C'-permits in other departments can be resumed after the end of the alarm period.

After an evacuation-alarm (except in the case of a yearly evacuation-exercise):

All permits will be handed in to Operations to be re-issued.

8. EXPIRATION OF A PERMIT

The valid time of a permit is preferably kept to a minimum, but will have a maximum of 7 working days. It will expire when the time specified in Section 2 is expired or when there have been 6 approved extensions of the permit (see reverse).

The further administration of the latter is described in par. 3.2 of GWP-9-002

Should the work not be completed within the permit time foreseen beforehand, but the permit had not been extended 6 times, Operations and Engineering can then decide whether they will make use of the heading 'Extension to ...' in Section 2; Operations will then fill out this heading provided with name and signature. This permit can still be used as long as the reverse allows for the number of extensions.

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9. NEW DAY'S WORK INSIDE THE TERM

For A permits this happens as follows:

- Engineering controls the correct presence of safety measures on the work site. He can also delegate this to a Registered Observer.
- Engineering (of the Registered Observer) will confirm to Operations that all safety measures are in place.
- The Operations team leader then moves to the work site.
- He makes sure that the safety measures are met with. If not, Engineering or the Registered Observer is contacted for correction thereof.
- The Operations team leader guarantees the on-going integrity of the safety measures.

For access and work with high temperatures he will check at least the correct execution (position and quantity) of the physical partitions (panels/blind flanges/couplings) and checks the main hazard chart (e.g. checking whether there have been tags already cancelled) in the proper file

- He performs the necessary special tests and reports these (Section A14), in the original as well as the copy of the work permit.
- If all this is in accordance to rules, he will then sign off Section A14, both in the original as well as the copy .

With 'B' and 'C' permits, allowed for a period longer than one day, at the beginning of the second and following work days these will be extended on the reverse of the original and copy to Operations, (Section B11/C7).

This extension can be done by the outside-operator or the inside-operator, after he has made sure through the outside-operator that the site allows for a safe execution of the work. This is also valid for PBW's with safety measures in Section 6. As a check-up for the integrity of the safety measures it is enough to check administratively the main hazard chart (check if there are any tags cancelled prematurely).

For B-permits of systems that exceed the classification, this extension will be done by the team leader by filling out Section B11, in the original and the copy.

Permits that run for 24 hour periods will preferably be extended for the next calendar day during a night shift.

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10. DUTIES OF ENGINEERING AND OPERATIONS DURING WORK

10.1. Engineering

- 10.1.1. Must ensure that the work does not begin before the permit is passed and on site. He will control regularly the work on site especially with respect to the safety measures agreed upon and maintaining the housekeeping standards.
- 10.1.2. Must inform all workers, under their supervision, about the conditions of the permit and explain the limitations thereof.
- 10.1.3. Must inform the Overseer of the Contractor about the conditions of the permit and explain the limitations thereof. This Overseer is responsible for informing his own personnel.
- 10.1.4. Must take care that, during the whole of the work process, all the special demands of the permit are met, and moreover, that only the usual safe practices and the necessary housekeeping are applied.
- 10.1.5. Must inform his replacement in charge (of execution on the permit as well as the proper instructions and situation). He will give him his pager to the new person in charge, who will carry it throughout the time of the permit. This facilitates contacting Engineering with Operations by means of the number of the pager on the permit.
- 10.1.6. Remains responsible for leaving the work site in a safe condition when work is interrupted.
- 10.1.7. Must assure that at the end of the work, the site is left clear, that is to say, accessible for a safe restart, with no tools, refuse, superfluous or broken material left behind.

10.2. Operations

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- 10.2.1. Guarantees the maintenance of safety measures as long as the work is in progress.
- 10.2.2. Guarantees the regular supervision, following the conditions on the site, as imposed by the permit.
- 10.2.3. Makes sure that the next shift is informed accordingly about the present work permits, and particularly the progress of access and work with high temperatures.
- 10.2.4. Only permits specially trained and registered personnel to perform special tests.

11. CHANGES IN THE CONDITIONS OF THE JOB DESCRIPTION OF A PERMIT.

Every change to the conditions of the job description and of safety measures of a permit must be discussed and signed by all parties on the original and the copy of the permit. Regarding changes in job description, it must be investigated whether these will have any impact on the required safety or preventative measures.

Operations must also write in any changes into Section A6/B6 in the main hazard chart.

When these changes are related to access or work with high temperatures, they are formally logged on the front page of the file in question.

12. END OF WORK

12.1. PAW / PBW

At the end and after control of the work by Engineering, the original copy of the permit will be filled in by Engineering as "**For end of work**" in Section A13/B10, and then returned to Operations. If resumption of normal operations is urgent, Operations must inform Engineering thereof and the permit is returned immediately after the work is completed.

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When there are 2 people working in charge of Engineering on the same work permit, the work permit must be filled out by all Engineering people involved for "End of Work". As long as this does not happen, the original permit stays in force.

Before signing "for end of work", the responsibilities of Engineering can be delegated to the registered deputy or to the one who is performing the work (tradesman or contractor). In the latter case, the name of the person who signs "for end of work" must be written down by Engineering on both copies (original and showthrough/carbon copy of the permit). In this case, the people involved do not need to be registered as Engineering/ Registered Deputy.

12.2 PCW

At the end of the work the person responsible for the work may fill out the original copy of the work permit in Section C6 "**for end of work**", and return it to Operations.

Date:

VAN CAYSEELE Alain
HSEQ Manager/Prevention Adviser

Date:

DE DEKEN Patrick
Factory Director

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Annex 1

List of places where it is not allowed to use permits for general work whereby safety measures are required.

- Insulation work to ducts that contain a 50% of NaOH
- Utilities: boilers-natural gas stations-ethylene stations- dea's
- EO/glycol: Cycle gas compressor-EO compressors-EO storage tanks- EO pumps located at refining as well as at the pumps for storage tanks – on ground floor EO reactors
- ENB: API separator
- HEC: H₂O₂ dump zone

General permits are not allowed to be used :

- When scaffolding has to be built higher than 12 meters (and therefore a calculation note has to be drawn up)
- in insulation work on systems warmer than 50°C
- in removing insulation saturated with a product



