(HAE-026168) WORKPERMIT SYSTEM

Notes:
- Added pragraph 4.7 ‘completion work’

1. Purpose, scope and target group

1.1 Purpose
The purpose of this procedure is to describe the Yara Sluiskil work permits system. The purpose of work permits is to enable employees to safely carry out activities that are outside the day-to-day operation of the production installations.

1.2 Scope
This procedure describes the requirements relating to the Yara Sluiskil work permits system, from the planning and determination of risks involved in the activities that are to be carried out, to the preparation and performance of these tasks.
The procedure is applicable in all cases in which:
A. activities are carried out by suppliers and maintenance personnel
B. activities are related to the unblocking of clogged-up/crystallised pipes/appliances by Yara production staff of the department concerned (see appendix 2 for a more detailed description)

If the permit issuer judges that, for whatever reason, a permit application does not meet the requirements laid down in this procedure, he/she should refuse the issue of the permit, and inform the applying party of the reason for refusal.

This procedure does **not** apply to normal activities in the suppliers plant and central workplaces.

1.3 Target group
The target group consists of all persons who carry out activities for Yara Sluiskil.

1.4 Training
Training and re-training: see HAE-028220HESQ training courses.

1.5 References
Yara-HOPS 1-02, Yara- TOPS 1-15.

1.6 Revoking work permits

1.6.1 Calamity:
In the event of alarm phase 2, all work permits for the entire site will be revoked, and in the event of alarm phases 0 and 1, the work permits for the department where the calamity occurred will be revoked. In such cases, the department’s evacuation plan is put into effect; see emergency organisation HAE-028295.

Activities should be suspended and if possible one should report to the issuer. If this is not possible, you should go to the nearest evacuation assembly area and report via the available emergency telephone.

Those present in the plant on the basis of registration of presence for activities which do not require a work permit (see appendix 2, A) should leave the installation and report in the control room or via the emergency telephone from the nearest evacuation assembly area.

1.6.2 Changed plant situations:
In the event of a change of management in a (part of a) plant, such as the return to operation of an installation component, the work permits for that part will lapse.

1.6.3 Removed safeties:
Removing safeties and replacing fuses may only be done after the work permit for the work in question has been submitted at the permit issue point.

1.7 Exceptions
During factory shutdowns, it is permissible to deviate from this procedure. The procedure relating to the issuance of work permits, valid for the shutdown, must be described in the Safety Plan that is created on the basis of HAE-026107.

Insofar as that has not occurred, this procedure is applicable.

2. Definitions

The following definitions are applicable to this procedure:

Work permit
Document / written permission for performance of the activities specified on the permit.

Zone classification for the safe work permit system
Demarcation of departments / site / area for the work permit system (see drawing no. HAS03998, latest version).


WVzone
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Applicant
Applies for work permit for activities to be carried out, and is responsible for a correct description of the activities. As a result of this, a proper evaluation by the issuer is possible.

Issuer
The person in charge of the operations of the factory or area in which the activities are carried out. With the production installations, this is the Production Coordinator, and in the event of his complete absence, the assistant Production Coordinator. If the PROCO present is unable to issue a safe work permit for a certain period of time during his shift, this will be done by the assistant PROCO. The latter must be aware of the other permits issued in the area in order to be able to sufficiently assess whether other activities can take place. For the other departments, during the absence of the issuer, the designated replacement for the department in question shall take over this task.
In addition, the issuer is responsible for the correct application of this procedure and may revoke work permits if the work supervisor or the personnel carrying out the activities does/do not comply with the stipulations laid down in the work permit or TRA, or otherwise run unnecessary risks.

Issuer's direct line manager
A department head or his appointed replacement, who, in the event of high-risk activities, must give permission for the work to be carried out in accordance with the established control measures. See persons listed on the 'Maintenance service telephone list' on Y:\Yara\info.

Work supervisor
Responsible for the performance of certain activities with one or more persons. In order to make communication possible, the work supervisor must have sufficient knowledge of one of the following languages: Dutch, English, German.

Personnel member
Person who, according to the permit system, carries out certain activities in conformity with the agreements.

Issuer post-handover
During the handover of the issued permit(s) between persons in charge of departments (PROCOs), the open work permits are discussed and, to signify handover, the person in charge of the department (Production Coordinator) who is taking over the duty puts his signature on the work permit. In the case of an electronic work permit, this is done digitally.

Joint signatories other department
When activities are being carried out by one department within the zone of another department (see drawing 137 dossier 20, latest version), the person in charge of this department should sign a copy (for acknowledgement of notification and for the environment in which the work is being carried out). The copy remains with the other department. For the performance of activities within a department which belongs to several zones, see 4.6.

Personnel attached to a department
See organogram in TQS to determine whether someone is attached to a department.

Task Risk Analysis (TRA)
The TRA is integrated in the digital work permit system. By choosing certain activities, it is either automatically assessed or assessed after answering a few questions whether they are high risk.

Start Work Analysis (SWA)
The purpose of the SWA is that the work supervisor, just before commencing the activities, conducts an SWA with his work team:
- one last time, run through which tasks they have to carry out
- know how they should go about the work
- know what the risks and dangers present are
- know how these dangers can be avoided or minimised.
- Each personnel member must sign the SWA, which is linked to the work permit.

Permit for welding, burning and grinding
Written permission for performance of welding, burning and grinding work is integrated in the digital work permit system.

Excavation permit
Document / written permission for the performance of excavation work and/or other types of activities in the ground. Attention: Excavation permit always in combination with a work permit.
Lifting permit
Document / written permission for the performance of lifting activities with mobile cranes. Attention: A lifting permit can, depending on the circumstances (e.g. for loading and unloading outside a risk area), be issued separately.

Place of issuance
The place where the work permit is issued:

Production departments	**a.** Issuance counter of the department.
	b. During special circumstances (revision, shutdown): the location as specified in the Safety Plan.
Other departments	Always the office of the local designated supervisor and/or replacement.

On the Zone classification safety permit, it is specified from which department this must be collected. Within the zones marked by the blue lines, one is at minimum subject to registration.

3. Tasks, competencies and responsibilities

The following tasks and responsibilities are applicable:

Role	Responsibilities	Tasks
Applicant	Responsible for having certain work performed. Applies for a work permit.	Applies for a work permit. Describes the activities to be performed. Signs application.
Issuer	Completes the work permits and issues them to those who are coming to perform the work.	Determines risk category of work permit. Determines whether a Task Risk Analysis must be carried out. Signs permit for issuance to personnel and attends to signature by work supervisor/personnel carrying out activities covered by ordinary work permit, and signature of work permit and TRA by all personnel performing work in the case of a high-risk permit. Issues work permit. Attends to formal handover of work permits for activities which will run on beyond his period of duty. Renews work permit. Sees to it that a check is carried out on the performance of the work/the workplace. Archives the work permit.
Person responsible for E&I	Gives permission for electrical activities.	Gives permission for performance of electrical activities in accordance with the established control measures.
Issuer's direct line manager	Gives permission for high-risk activities.	Gives permission for performance of high-risk activities in accordance with the established control measures.
Personnel member / Work supervisor of personnel member	Responsible for the performance of the work. Responsible for compliance with control measures.	Signs work permit and declares his agreement with stipulated requirements. Carries out work in conformity with agreements. Work supervisor informs all personnel members of own team (ordinary work permit) and ensures signature of the integrated SWA by these persons.Leaves workplace clean afterwards. Hands in work permit.

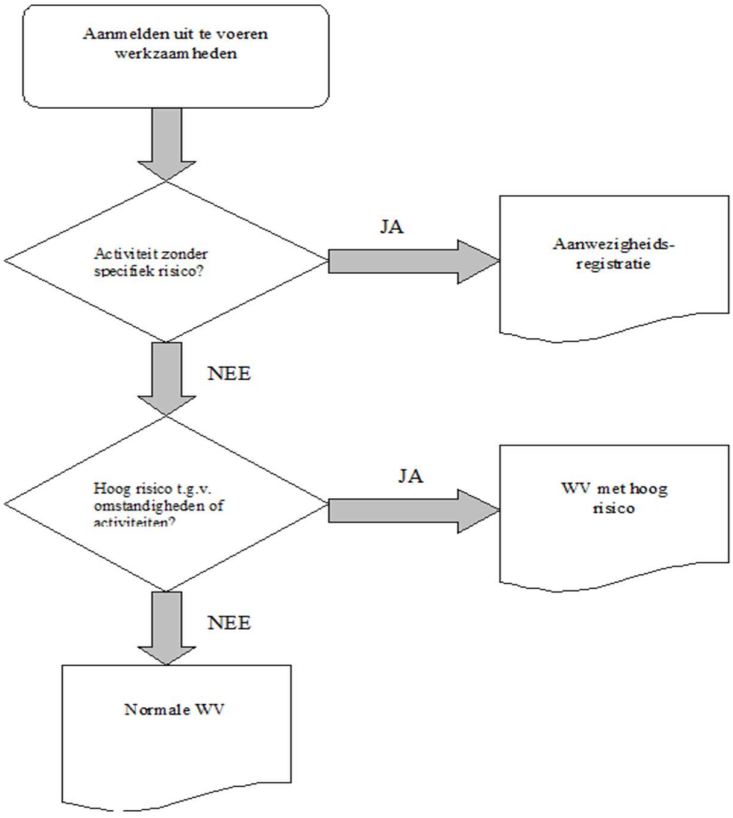
4. Procedure

4.1 Determination of risk category

With every activity to be performed, it must be established what the risk category is, so that the correct control measures can be taken. The activities are classified into three risk categories:

Category	Required permit	Explanatory notes
Without specific risk	Registration required	In exceptional cases, registration will be sufficient. See Appendix 2.
Normal risk	Normal work permit	The standard work permit. Is in principle always necessary. See Appendix 2.
High risk	Work permit for high-risk activities	For activities in which a high risk to persons and surroundings can occur, or which involve high risk of disturbance/interruption of process(es). This is a Risk Analysis Level 2. An exception is the TRA for excavation work, drawn up by SPTM or FAC, which must be signed by a departmental manager (PROCO) on the TRA itself. See Appendix 2.

In appendix 2 a more detailed elaboration of the various categories is given. Attention: this is an indication! It is the responsibility of the Issuer to determine the ultimate risk category. The diagram below specifies how one determines which permit is necessary.

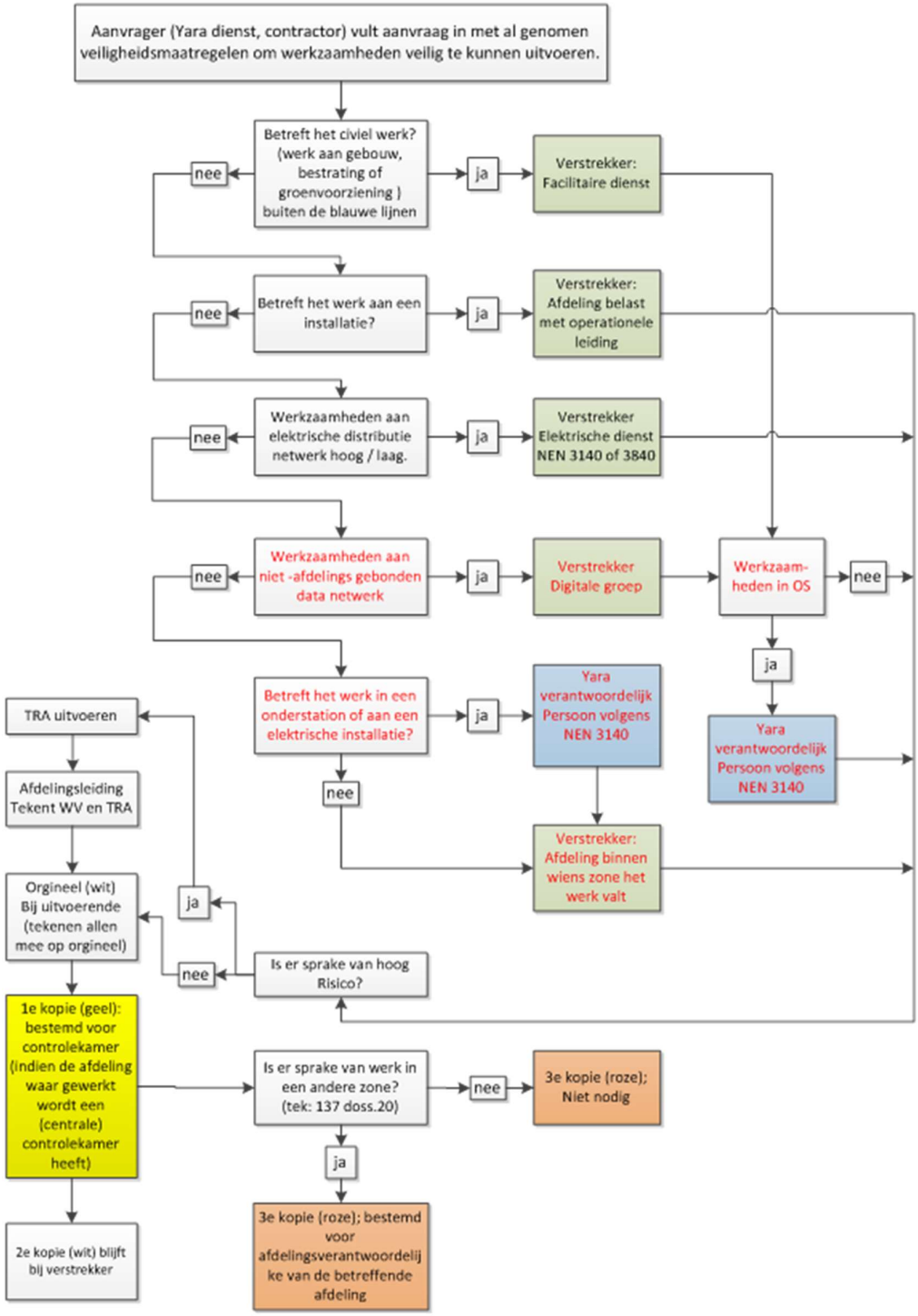


External factors (including weather conditions):

If, during the performance of activities, but also during presence on-site in situations not requiring a work permit, factors beyond human influence such as extreme weather conditions (extremely strong wind, thunder) constitute a danger to the persons who are performing the work, then in all

reasonableness it should be considered whether to cease the activities (temporarily); this in consultation with the issuer of the (possible) work permit.

4.2 Issuance of work permit, diagrammatic overview (to be amended further after the implementation of the electronic work permit)



Werkvergunning flow 27022015.docx

4.3 Start Work Analysis (SWA)

The SWA is for the purpose of making people conscious of a number of safety-related circumstances *before* commencement of the work. The work supervisor discusses the SWA with everyone who has an executive involvement in the work. After that, each personnel member has to sign the SWA.

- The SWA is an integrated part of the work permit.
- The SWA is discussed by the work supervisor.
- The SWA is signed by each person involved.
- With high-risk work (= TRA-mandatory), the correct workplace (pipeline, flange, pump, etc.) is indicated by a production employee in the field.
- On a sample basis, check the SWAs in the field to ensure that they have been correctly filled in.
- During maintenance shutdowns, deviations from this can be described in the Safety Plan.

4.4 Welding, burning and grinding permit

Is integrated in the digital work permit system.

All welding, burning and/or grinding work should be carried out with a continuous gas analyser (%LEL) on site, with the exception of official workplaces. Prior to the issue of the work permit with permission for hot work, an instantaneous measurement should be carried out, making use of a gas analyser other than the continuous meter provided. See also HAE-025445 Control, use and application for Explosivity meters and other meters.

All other control measures specified on the work permit continue to apply with undiminished force.

4.5 Task Risk Analysis (TRA)

The purpose of a Task Risk Analysis (TRA) is to determine the risks associated with certain activities and to establish the correct control measures to be taken in order to minimise the risks identified.

The TRA is integrated in the digital work permit system. Choosing certain activities or checking off one of the questions determines whether a TRA is required.

A TRA must be jointly carried out by, at minimum, the following involved parties:

- Representative(s) from the department where the work activities will be carried out (issuer).
- Representative(s) from the Yara service under whose responsibility the work activities are being carried out.
- Representative(s) of those who are to carry out the work activities in question.
- If desired or if necessary, other expert(s) may also be asked to participate in the TRA.

The issuer's direct line manager signs the TRA form. In the case of an electronic work permit, this is done digitally.

When a work permit with TRA is issued, the TRA should be discussed with, and signed by, all parties involved.

The activities specified on the Task Risk Analysis form are split up into so-called task steps in the logical sequence of the working method. For each task step:

- the risk is described.
- the control measures for restricting the risk to a minimum are defined.
- the person responsible for carrying out the control measures is specified.

This also entails that in the TRA account should be taken of emergency situations that are directly connected with the performance of the work: extra measures (organisational, technical) concerned with the bringing to safety of an employee or employees who, despite good preparation, end(s) up in an emergency situation. In this connection, think in terms of material(s) necessary for rescuing someone from a confined space. In such a case in which extra control measures are needed for the (possible) rescue of employees, reference is made in the TRA to the 'Rescue Plan'.

The Rescue Plan includes the correct control measures, and is appended as a separate document to the work permit.

4.6 Registration of presence of personnel

Registration of persons within the various departments should take place in conformity with HAE-027350 TAB 2 Safety zones.

For activities performed outside the blue lines, as mentioned in appendix 2 under A, which may take place anywhere on the entire site, a central registration obligation is applicable.

4.7 Completion of the work

At the end of the job, the workpermit is returned to the permitissuer. The issuer then arranges an endinspection to ensure that:

- the work has been carried out in accordance with the agreement.
- the equipment / equipment / etc has been delivered in the correct condition.
- the workplace is left safe, orderly and tidy.

4.8 Other stipulations

4.8.1 Activities under the direction of the Facility service

For activities carried out under the direction of the facility service – being activities of a constructional nature on buildings (inside or outside), but not, however, including work on installations, paving work outside the safety zones or work on green spaces – the work permit is issued by the person in charge from the Facility service.

Work supervisor/personnel take(s) a copy of the work permit to the person in charge of the department, for purposes of notification and evaluation. If the person in charge of the department in which the activities have to be carried out has strong technical objections, direct consultation with the issuer of the work permit is desirable.

The copy remains with the person in charge of the department; if applicable, another copy is handed in at the other departmental section for purposes of notification. Welding/burning/grinding permits are in all cases issued by the person in charge of the department/zone where the activities are to be carried out.

4.8.2 Work on third-party installations

For the installations of 'third parties' situated on the Yara Sluiskil site, in which these 'third parties' themselves carry out activities within these installations and bear the responsibility for the application of possible control measures.

This procedure shall apply to:

- Gasunie receiving stations: Gasunie, insofar as they are carrying out work on their own installations
- WarmCO CO2 plot: Atlas Copco/WarmCO, insofar as they are carrying out work on their own installations.
- Evides: for their own installation.

4.8.3 Work on electrical distribution network high + low.

A few examples:

- 15/6 KV transformers (the large ones at the plants)
- 6 KV transformers
- High-voltage switchgear of transformers
- Work on rail systems

4.8.5 Work on non-departmental data network.

A few examples:

- Office IT network

- Non-departmental critical data networks between departments

For the above activities, the flow should be as follows:

1. Application: by representative/person in charge of ‘third parties’ or appointed Yara employee.
2. Measures to be taken: by representative/person in charge of ‘third parties’ or appointed Yara employee.
3. Issuer: representative/person in charge of ‘third parties’ or appointed Yara employee signs permit as issuer, after all control measures have been determined and indicated on the permit.
4. Copy of work permit: representative/person in charge of ‘third parties’ or appointed Yara employee takes copy of the work permit to the PROCO of the department within whose area of responsibility the installation of the ‘third parties’ is located; this as notification of the intention to carry out activities. The PROCO checks if there are no conflicts with his/her department at the time of endorsing the copy.

After termination of the activities, the copy is endorsed, and the entire permit is endorsed. The complete permit remains in the appointed archive of the department within whose area of responsibility the installation of the ‘third parties’ is located.

4.8.6 Nitrates/Urea

Activities carried out by departmental production personnel which relate to the unblocking of clogged-up/crystallised pipes and appliances are characterised as high-risk work, and a work permit and TRA are mandatory.

Removal of accumulations/chunks of solid product or (auxiliary) substances from process/installation components can cause a high-risk situation for the employee, and should be assessed as such by the issuer. For these types of activities, a work permit should be issued in any case, possibly supplemented with a TRA, depending on the possible risks (falling chunks, etc.)

For activities in the production, storage and offloading of nitrates, welding, burning and grinding activities may only take place if another method of working is not possible; this in connection with the dangers of fertiliser substances containing nitrates.
In cases that *do* occur, extra precautionary measures are taken (use of fire-resistant cloth, extra water for fire-extinguishing).

4.8.7 Radioactive sources

If activities take place on or in the vicinity of radioactive sources, this must be notified to the expert within HESQ. During non-destructive materials testing (NDT), the Urea and Nitrates departments should always be informed.

4.9 Main connections between the relevant safety procedures.

	Work permit (incl. welding, burning and grinding)	Excavation permit	Lifting permit
Validity period	Max. 8 hours, or longer if the job is carried out continuously by the same persons. Max. 24 hours in total.	2 months	1 day
Retention period / location after end of work Ref: HOPS 1-02	1 year, issuer	1 year, drawing office	1 year, issuer
Signature, Yara	Issuer	Drawing office, person in charge of E&I and Facility service	Planning employee and PROCO (or his deputy)
Special stipulations / procedures (if applicable)	- Making electrical equipment/power supply safe, HAE-025968 - Confined spaces, HAE-026167 - On-stream leak detection, HAE-025100 - Maintenance & Hygiene, HAE-026427 - ATEX, HAE-026427 - Overhead work, HAE-026195 - Radioactive sources, HAE-026452 - Removal of asbestos, HAE-028222 - Solo work, HAE-028330	Excavation permit, HAE-026861 WION notification for excavation work outside the site. In the event of doubts concerning pipes/cables of third parties (via Facility Service or HESQ).	Lifting permit, HAE-026858 Crane logbook / crane inspection certificate required. Check lifting equipment and place of work.
Registration of expertise	Mandatory registration work permit Issuers training at HR		Crane operator certificate

	Validity period	Approval required from
Digital work permit	Max. 8 hours, or longer if the job is carried out continuously by the same persons. Max. 24 hours in total.	
Digital work permit	Request at least 36 hours in advance.	
Work permit copy	Max. 60 days	Production Manager or replacement
Work permit template	Max. 365 days	Production Manager or replacement
LOTO copy	Max. 60 days	Production Manager or replacement
LOTO template	Max. 365 days	Production Manager or replacement

5. Lockout / Tagout (LOTO)

5.1 Purpose

The unambiguous application of the Lock Out Tag Out system (hereinafter referred to as LOTO) as a component of the Safe work permits system. The LOTO system should be applied during activities on (part of) an installation, if 'energy' (in the form of pressure, temperature, electricity, hazardous substances, etc.) may possibly enter into the part of the installation that has been rendered free for the performance of the activities.

By systematically affixing a Lock to those places behind which the energy is located (cut-off valves, safety fuses) and identifying (Tagging) them, and maintaining an administration regarding these measures (LOTO register) as a component of the work permit issued for the job, the unwanted release of that energy is prevented.

5.2 Definitions

Lock:
Lock of a particular colour, provided with a unique key with key ring. All locks are available from (and are issued by) the WP issuer.

Explanatory note: the system of 'personal locks' is not applied at Yara. From the perspective of safety techniques, it makes no difference whether a lockbox is secured with a personal lock, or with a lock that is provided by the WP issuer, the key of which remains in the possession of the foreman. The use of personal locks requires a large number of extra locks, so that also the chance of having to apply the (undesired) Emergency Procedure increases as a result of loss, or if due to unforeseen circumstances the holder of the personal lock is not present (any longer) on company premises.

The following are distinguished:
- RED locks: locks to be used by production employees in order to render a system safe. RED locks all have a unique lock number.
- GREEN locks: locks to be used for rendering electrical installations safe. GREEN locks all have a unique lock number.
- BLACK locks: locks to be used by the foreman for securing the 'lockbox' allocated for this job. BLACK locks all have a unique lock number, and are issued by the WP issuer.
- BLUE locks: locks to be used by the WP-issuer for securing the 'lockbox' allocated for this job. BLUE locks all have a unique lock number.

Field lock:
An operating impeder (handwheel ratchet, cable, safety switch and suchlike, with fitted padlock) on appendages and suchlike, for the purpose of securing and guaranteeing an energy-blocking installation.

Tag:
Card with data (enter date, name of person placing lock and tag, number of work permit for which the lock and tag has been affixed) fastened, together with the lock, on the cut-off valve, safety fuse(holder), etc.

Lockbox:
Metal box in which keys of field locks are stored for safekeeping, and which can be secured with the locks of the employee carrying out work and the work permit issuer.

LOTO registration:
Registration form that records all the steps of the LOTO system. In the case of an electronic work permit, this is done digitally.

LOTO-mandatory:
Activities which, on the grounds of the risks, are 'LOTO-mandatory', as it is called; this at the judgment of the work permit issuer(s). By definition, those activities for which the work should be safeguarded from energy-charged impact coming from the installation during the performance of the work. LOTO-mandatory activities should be applied for at least 36 hours in advance, before 3.30 p.m. In the event of doubt as to whether an activity is LOTO-mandatory, the planner of the work should contact the WP issuer about this.

LOTO work instruction:
An inventory, created and checked by production staff, of the LOTO points, and the VP, indicated on a diagrammatic drawing (see doc. LOTO work instruction). Work instructions are stored systematically, for use (after check on validity) during later activities on the system for which the work instruction was created.

VP:
Verification Point. The point by means of which it can be established whether the disengaged system is indeed energy-free. In the column 'LOTO point' on the LOTO registration form, the VP is made recognisable with the letters 'VP'.

5.3 LOTO procedure
For every activity which is LOTO-mandatory, and for which a work permit is therefore mandatory, and which has been applied for at least 36 hours before the performance of the activities, and which on the basis of the risks is 'LOTO-mandatory', as it is called – this to be evaluated by the work permit issuer(s) – the following preparatory steps are taken:

Production creates a digital instruction in which all, and the correct, LOTO points are identified with a number. Each LOTO point will be noted with its respective number. A LOTO box is prepared, containing all necessary LOTO locking measures, including RED locks.

The LOTO-mandatory activity is subsequently assigned the status of LOTO Level 1.

Level 1
E&I or FLM-E, if identified on the LOTO work instruction, renders the installation safe. A distinction must be made here between rendering electrical work safe and rendering non-electrical work safe. However, FLM-E can only be render safe non-electrical work on switch boxes that are suitable for the use of LOTO. If the switch box is not suitable for LOTO, one should act as if they are rendering electrical work safe and this should therefore be carried out by E&I.

- Rendering electrical work safe:
  This should always be done by E&I. The use of the so called 'green fuse note' remains mandatory. The switch box is also rendered safe with a lock. If this is not (yet) physically possible with regard to the design of the switch box, the switch is locked in 'off position' near the motor. The safety setting is secured with a GREEN lock, with a unique number and a fieldtag. The lock number is noted on the LOTO registration, and in the column Level 1, the safety setting is registered by name. The key is deposited, together with the pink copy of the safety fuse note, INSIDE a lockbox allocated and marked for this purpose, in the office of the WP issuer. The white copy of the fuse note remains in the folder for the administration.
- Rendering non-electrical work safe:
  This should be done by FLM-E. The use of the so called 'green fuse note' does not apply here. The switch box is rendered safe with a lock. The safety setting is secured with a GREEN lock, with a unique number and a fieldtag. The lock number is noted on the LOTO registration, and in the column Level 1, the safety setting is registered by name. The key is deposited INSIDE a lockbox allocated and marked for this purpose, in the office of the WP issuer.

After rendering safe, the VP (Verification Point) must be checked. This is a test start of the installation and any interlocks must be taken into account. The LOTO registration form created for this job is

completed for Level 1 (with name in capital letters). Subsequently, the activity is assigned the status of Level 2. HAS-005959 FLM-E Operational manual

Level 2
Production department renders installation (component) safe in accordance with work instruction (empties it out, renders it pressure-free, possibly flushes it out, etc.) and checks VP (Verification Point). All points identified in the work instruction are secured with appropriate locking material with unique red locks and tagged. VP (can/may be multiple VPs) are locked in the open position in accordance with work instruction, and tagged with a red lock. Keys are deposited **INSIDE** the lockbox allocated and marked for this job (label on outside displaying WP number), in the office of the WP issuer. The LOTO registration form created for this job is completed for Level 2 (with name in capital letters).
Subsequently, the activity is assigned the status of Level 3.

Level 3
Foreman/work supervisor of work team comes for WP; WP issuer – or a person appointed by the WP issuer – goes together with foreman to check VP.
If VP is OK, then foreman places a black lock (to be issued by department) on the outside of the lockbox (with tag) that has been allocated and marked for this job. Key remains in the possession of the foreman of the work team until the end of the job. Contents of the lockbox (of Levels 1 & 2) are then no longer accessible. The LOTO registration form created for this job is completed for Level 3 (with name in capital letters). Representative of production department and the foreman/work supervisor both do this in column Level 3.
Subsequently, the activity is assigned the status of Level 4.
If during the field check of the VP it turns out that the installation component cannot be released, it must be examined whether the work instruction should be adjusted (use other cut-off valves further up- and/or downstream.) If this is the case, then the work instruction must be adjusted, and Level 2 must be gone through again.

Level 4
WP issuer secures lockbox with a blue lock with tag; key goes into LOTO key cabinet. On the work permit, in column C1, the word ‘yes’ is entered in the field ‘LOTO-mandatory’. The LOTO registration form created for this job is completed for Level 4 (with name in capital letters).
Subsequently, the work permit can be issued in accordance with the normal WP procedure. During the performance of the work, the job continues to retain the status of Level 4. After termination of the job, at the time of handing in the WP the activity is assigned the status of Level 5.

Level 5
Foreman/work supervisor of the person(s) carrying out the work hands in the work permit after termination of the activities. The foreman/work supervisor removes the black lock, and hands back the lock and the key to the WP issuer, and completes LOTO registration form in column Level 5. WP issuer removes the blue lock, and completes LOTO registration form in column Level 5. The handing-in of the WP is completed in accordance with the procedure. The contents of the lockbox (keys of Levels 1 & 2) are rendered available.
The (finished) job is assigned the status of Level 6.

Level 6
Production department takes keys for red locks out of the lockbox and (if so desired) makes the installation ready for operation once again. If the installation does not have to be made ready for operation (under pressure’, etc.), all field locks are removed and rendered available for a subsequent LOTO-mandatory job. The LOTO registration form created for this job is completed for Level 6 (with name in capital letters).
The (finished) job is assigned the status of Level 7.

Level 7

E&I or FLM-E takes the key of the green lock out of the lockbox, and the electric lock is removed. Removed fuses are replaced by E&I based on the pink copy of the fuse note in the lockbox (if present). The system components are then set up for operation. The LOTO registration form created for this job is completed for Level 7 (with name in capital letters). The job is now finished, and the installation can/may be used.

5.4 Administration

The LOTO registration form and the work instruction, together with the work permit, are stored in accordance with the requirements which apply to the retention period for work permits. The work instruction is also stored electronically, and kept as a basis for a work instruction for the same installation component at some later time. The department attends to this administrative completion.

5.5 Exceptions

During a maintenance shutdown, it can be described in the Safety Plan written for that maintenance shutdown how the LOTO system will be applied, together with the description for the work permits regime applicable during the maintenance shutdown.

5.6 Emergency situations/deviations

If it is necessary to deviate from the above-named procedure concerning LOTO as described above – as a result, for example, of the loss of a key or an emergency situation – one may deviate from the normal procedure. The WP issuer, together with a direct line manager (a person who is listed on the duty roster for that department, just as with the signing of a TRA for high-risk work), will establish that the work is finished, or suspended, and that the installation is technically in good order and ready to be powered-up once again, so that the field lock(s) can be removed without risk.

The following checklist should be used for cutting through LOTO keys:

Checklist loto knippen (versie 29-0 New

5.7 LOTO documents

Flow + Blank

Flow LoTo.pdf

LoTo Registratie Rev. 5.pdf

Appendix 1 - Cross-departmental activities

The digital work permit has no copies. For cross-departmental work, it is necessary to make a copy of the work permit and to deposit it in the relevant department.

Example of use of the various copies:
The Facility service issues work permit for mowing grass at various places (In example: Reforming D / E.)
Applicant (personnel carrying out activities) receives from issuer:

- The original
- A copy of the original which he deposits at the department concerned

Appendix 2 - Risk classification of activities

This appendix gives a classification of activities on the basis of the possible risks. This classification is intended as an indication. It is the responsibility of the Issuer to determine the definitive risk category.

A. Activity without specific risk (registration of presence at control room)
In the following cases, one is subject to registration:

Work visitors, both:
- External (not Yara personnel): for example, for orientation or determination of progress
- Internal: Anyone who does not belong to the production personnel of the department concerned should register themselves.

A few examples of activities which require registration:
- Small-scale activities by E&I (e.g. withdrawing fuses).
- Sampling.
- Reading meters.
- Cleaning activities and sweeping activities outside a Safety zone but within the zone area of the department (HAS03998.dwg).
- Retrieving industrial waste within the department (regular waste flows).
- Small-scale constructional activities in building.
- Central heating installation in building.
- Loading and unloading of goods items (report to department).
- Loading and unloading of non-hazardous substances.
- Loading and unloading of hazardous substances. A checklist is used for this purpose. See procedure HAE-025795.

For the retrieval of waste containers or the emptying of waste containers by the regular waste-disposal company in conformity with the regular route, central registration at the Facility Service is applicable.

B. Normal work permit
In the following cases, a normal work permit (at minimum) is required:
- All activities carried out by contractors that do not fall under the registration obligation.
- Activities carried out by own production personnel relating to the removal of accumulations/chunks of solid product or (auxiliary) substances from process/installation components can cause a high-risk situation for the employee, and should be assessed as such by the issuer. For these types of activities, a work permit should be issued in any case, possibly supplemented with a TRA, depending on the possible risks (falling chunks, etc.).
- All activities carried out by Gasunie.
- Activities carried out by Yara personnel, both within and outside of daytime working hours that do not fall under the registration obligation.
- E&I activities in substations, with the exception of small-scale activities such as withdrawing fuses.
- Excavation work.
- Lifting activities except as stipulated in point 2 under ‘attention’.
- Activities in which people are working with a possible source of ignition, such as: welding, grinding, cutting and hacking/chopping activities, heating up, annealing, diesel generators/motors or the use of non-explosion-proof tools.
- Sampling, if not present on sampling list.
- Activities that are carried out across the entire site.
- During cleaning activities within the safety zones.
- Brushing/sweeping activities within the safety zones.
- Mowing grass.
- Plumbing work.
- Work on air-conditioning systems.
- E&I activities.

C. high-risk due to circumstances or activities to be carried out
If there is a question of high risk, then a high-risk permit should be applied for.

High risk can occur in the following cases:
1. Due to special operational circumstances in the plant such as immediate danger from the factory, installation or surroundings; for example, as a consequence of lack of oxygen, poisonous or highly inflammable substances.

   A few examples:
   - Opening of systems (pipes, appliances) which have not been flushed out and from which poisonous, very aggressive or highly inflammable substances may be released. In this connection, think, for example, of: hydrogen, methane, ammonia, MDEA, liquid CO2, caustic solutions, acids, systems under pressure.
   - Environment with vapours, gasses, or dust above the threshold limit value, for which reason respiratory protection must be worn.
   - Entering confined spaces with above-mentioned dangers.

2. Because the activities to be carried out can in themselves cause direct personal danger due to the tools, materials or resources used.

   A few examples:
   - Clearing clogged-up/crystallised pipes by using steam, also if this is being done by production personnel.
   - High-pressure cleaning (pressure higher than 250 bar).
   - Working with sources of ionising radiation.
   - In unusual circumstances: activities in which people are working with a possible source of ignition, such as: welding, grinding, cutting and hacking/chopping activities, heating up, annealing, diesel generators/motors or the use of non-explosion-proof tools. If the activities take place in an ATEX-zoning area (zone 0, 1, or 2) according to the departmental zoning drawing, this should be stated on the work permit in section A6. Account should then be taken of sources of ignition as a consequence of the activities or the material used.

3. As a result of activities of a high complexity that can have influence on other units.

4. If a new, or adjusted, working method or procedure is being employed, there may be a question of high risk.

In all other cases, the departmental leadership determines whether there is a question of unusual operational circumstances.

D. Excavation work:
If there is a question of excavation work, the (mandatory) excavation permit will always be accompanied by a TRA, drawn up in order to establish the underground risks, and to agree upon the corresponding control measures. Based on the underground risks, there may thus be a question of high-risk excavation work.

If there is also a question of a high risk overhead (amongst other things, in consequence of the location), such as in the vicinity of overhead installation components or circumstances, the issuer of the work permit may decide that a high-risk work permit must be issued. For this purpose then, together with the work permit an accompanying TRA should be created, in which the overhead risks and appropriate control measures are determined.

If there are no overhead risks, the work permit can be issued under normal risk, despite the fact that the excavation work itself (based on the underground risks) has possibly been designated as high risk.

Appendix 3:

Blank TRA form (after completing an EWP, this will no longer apply as it is part of the electronic work permit)

TRA formulier_REV_05-20

Blank rescue plan

Reddingsplan yara rev 3.docx

SWA form (after completing an electronic work permit, this will no longer apply as it is part of the electronic work permit)

- SWA-Dutch: Off.0420-136; XSLU 3650297
- SWA-English: Off.0420-137; XSLU 3650298
- SWA-French: Off.0420-138; XSLU 3650294
- SWA-German: Off.0420-139; XSLU 3650293