
TAV-66: Information for the tendering process
English compilation of Site Safety Procedure FVV 4.1
General Health, Safety and Environmental Regulations

Date : 16/02/2015

Rev. : 2

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1. SUBJECT

General health, safety and environmental regulations.

2. AIM

- a. To prevent incidents and accidents
- b. To promote health, safety and environment (HSE) in the factory, by establishing general HSE regulations INEOS and non-INEOS personnel must comply with in the factory.

3. REGULATIONS

3.1. General attitude

- 3.1.1. Everyone's first responsibility is to ensure they work safely. Therefore, everyone should build-in a moment of self-control before starting any task in order to evaluate the risks involved. LMRA checklists should be used for this purpose.
Do stop your own work or have others stop their work when the situation is or becomes unsafe.
- 3.1.2. Everyone needs to be vigilant for the risks colleagues could be exposed to and should inform them thereof. This is called the 'Brother's keeper' principle.
- 3.1.3. Everybody should contribute to a good housekeeping standard.
- 3.1.4. Everyone should stick to the task that he has been allocated to and for which he is competent, trained and responsible
- 3.1.5. Everyone should be aware of the presence and correct use of fire-fighting and safety equipment that is available at his workplace.

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This includes:

- Emergency showers
- Eye baths
- Emergency stop buttons
- Alarms points
- Fire-fighting equipment
- Evacuation masks and breathing apparatus
- Sprinkler systems
- Emergency exits
- Fire breaks

- 3.1.6. Employees shall only be present in those parts of the factory where their duties require them to be.
- 3.1.7. The tools that are used must be suitable for the work to be carried out. They must be in good condition and used in the correct manner.
- 3.1.8. When using stairways the guardrail must always be held. Stiletto heels shall not be worn when using stairways with grating type steps.
- 3.1.9. It is forbidden to block access to fire-fighting and safety equipment, to building entrances and exits and to emergency ladders.
- 3.1.10 In case of necessity or doubt, one should always make use of the information and instructions mentioned in the guide GWP (Good Working Practices), the Guide for Safe Handling of Chemicals, PPE-guide, the FVVs (Works Safety Procedures) and the FV's (Works Procedures); these documents can be provided by the INEOS Executant.

3.1.11. Pregnant women are not allowed to access the operational areas. They only have access to administrative buildings (works building and training centre) and to the medical service.

3.2. Personal Protective Equipment (PPE's)

3.2.1. General rules

The minimum work clothing for execution of operational or maintenance/construction activities consist of:

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- Closed working clothes (jacket with long sleeves + pants or integral working suit)
- Safety shoes

Everyone entering an Orange Zone must wear the following standard PPE's:

- Closed 'multi-norm' working clothes (jacket with long sleeves + pants or integral working suit) that minimally complies with the following standards:
 - EN ISO 11612: 2008 – Protection against heat and flames
 - EN ISO 1149-5 - Protection against build-up of electrostatic energy
 - EN 13034 class 6 (Protection against liquid chemicals) and an improved visibility through reflection and fluorescence is recommended, however without the need to comply with norm EN 471.
- Hard hat
- Goggles, preferably mounted onto the hard hat; if not then they must be available within hand reach.
- Safety shoes in class S3 (according to EN 20345)
- Safety glasses with side shields
- Gloves suited for the work to be performed. For specific jobs, specific types of gloves are to be used (acid-, fire-, cut-, puncture-resistant) as defined by the PPE Guide, Standard Operation Procedures, Task Analysis or ad-hoc specified on the Work Permit. Gloves shall – in combination with the long sleeves – fully protect the underarm.

Employees, contractors or visitors of INEOS who enter the EVAL or NSE areas, must wear the PPE's mentioned above, although those areas are not physically marked as Orange Zones.

Specific PPE's are used depending on:

- The job to be executed as described in the relevant procedures/task analyses
- The tools used as described in the User's Manual
- The chemicals handled as described in the MSDS info
- The location where the job is performed as indicated by picto's or local area requirements.

Exceptions:

- * In control rooms, offices and administration buildings.
- * Writing within the Orange Zones can be performed without wearing gloves.
- * Ship pilots, mooring personnel and ship's agents who enter the jetty just in order to (un)board a vessel, only need to wear the PPE's as prescribed by

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their employer. These PPE's are mentioned in the Operating Procedures and pictured on a plaque at the jetty entrances

3.2.2. Specific rules

3.2.2.1. Hard hats

During welding, when no hard hat can be used, a bump cap must be used (see maintenance procedure OVM-2-302 – 'Welding safely' for more details).

At the drumming installation in the Terminal area, free from risks from falling objects, the use of a bump cap is allowed as an alternative for a hard hat.

There is no need to wear a hard hat in labs or in maintenance shops, control rooms and offices.

3.2.2.2. Safety shoes

No safety shoes need to be worn in the walking areas in the maintenance shop and the warehouse.

3.2.2.3. Safety glasses

In labs, the use of safety glasses is mandatory, except in the administrative areas that are separated from the analytical area. In the central shop/warehouse, safety glasses are mandatory when performing activities with inherent risks for eye injury. Around filling installations, the use of safety glasses is mandatory.

In the 'HEC bagging' area, no safety glasses are required, except around the bagging machine, the dump hopper and the Piab system.

3.2.2.4. Full face shield

During the execution of grinding work, the use of a full face shield is mandatory, together with the use of safety glasses underneath.

3.2.3. The use of goggles is mandatory:

- Whenever entering a zone marked-off with a blue line on the ground
- When taking samples and during other operations in which risks for direct contact with chemicals exist as described in Good Working Practice nr. GWP-5-001

3.2.4. The use of hearing protection is mandatory as from 80dbA regardless the time spent in that zone.

Hearing protection can be imposed due to nature of the working area or due to the kind of activities that are performed.

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Areas where hearing protection is mandatory:

- All locations where pictograms impose hearing protection
- All production units: the waste water treatment unit and the CHP unit are not considered as production units, neither are the tank farms and the terminal area.

Exceptions: In the HEC bagging, except around the bagging machine.

Activities that require the use of hearing protection anyhow:

- Grinding, pneumatic hammering & drilling, ...

- 3.2.5. Jewelry must be fully covered by the safety clothing; long hair needs to be tied-up

In the exceptional case of working on rotating machine parts, no gloves/juwelry shall be worn in order not to be caught.

- 3.2.6. Special protective equipment is compulsory in circumstances involving exceptional risks. The circumstances in which this safety equipment shall be worn are described in the Standard Operation Procedures, the Good Working Practices and are specifically mentioned on the Work Permits.
- 3.2.7. Self-contained breathing apparatus shall be used as protection against gases/fumes and toxic volatile substances above the TLV-level. The use of respiratory filters is only permitted for reasons of comfort at concentrations below the TLV level, if this method of working is included in the Operations Manual.
- 3.2.8. Truck drivers getting out of their vehicle and entering the (un)loading areas will use the locally required personal protective equipment. Safety boots/shoes and an overall with trousers and long sleeves are always required, as well as a reflecting safety vest. For activities in open air at the (un)loading areas safety glasses and a hard hat are compulsory.
- 3.2.9 Work at height for which no structural measures exist to prevent a vertical fall, shall be subject to a pre-task risk analysis resulting in the definition of adequate prevention measures.

- 3.3. Traffic

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- 3.3.1. Within the factory a general speed limit of 30 km/hour applies, and the “General Police Road Traffic Regulations” apply with the exception of the articles mentioned in appendix 1.
- 3.3.2. In the event of a fire alarm all motorised traffic must clear the route, stop and turn off their engines, but leaving the key in the contact, until the signal “End of Fire Alarm” is given. The zone involved must be evacuated by everyone except the operation personnel of the area involved and the personnel involved in fire-fighting.

In the event of an evacuation alarm, everyone stops working (except for personnel who have a defined task during evacuation) and proceeds, after securing their work place, to register to a convenient evacuation area. In case personal badges could not be used to badge out, or when no registration is possible at the evacuation area, one will register out at in the Car-Park South.

- 3.3.3. Cycling
- Cycling is only permitted outside the Orange Zones. The only exception is for members of the fire squad in case of a fire/evacuation alarm
 - One can take his bicycle at hand towards his workplace within an Orange Zone.
 - Cycling on concrete ‘stelcon’ plates is allowed outside the Orange Zones, unless when forbidden by other local indications.
 - Suggestion-lanes for cycling on the main roads shall be used when available.
 - Nearing a cross-road marked with a STOP-sign, cyclists shall reduce their speed in order to anticipate on dangerous situations. When traffic from any other direction is nearing, the cyclist shall stop.

3.4 Connections to utility drops for nitrogen and air.

Utility drops for N2 and air are equipped with different coupling types (air=quarter turn; N2 = Evertite). This set-up should avoid any unintended and accidental cross coupling between N2 and air. It is forbidden to fabricate or withhold hybrid type connection pieces that can be used to cross connect N2 and air.

3.5. Agreements and procedures

- 3.5.1. Everybody working on the site must be familiar with the safety regulations and should strictly adhere to them. Deviation from a safety procedure can

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only be permitted after formal approval of a deviation procedure document according to FVV 1.7.

- 3.5.2. Access to the factory will only be granted to holders of a valid INEOS access badge and only for the period that their presence in the factory is required.
- 3.5.3. Warning signs, hazard signs and signs that give certain instructions must be obeyed.
- 3.5.4. Everyone who incurs an injury, must have the injury attended to immediately and report this to his chef, or INEOS responsible.
- 3.5.5. Dangers, whether real or supposed must be notified immediately.
- 3.5.6. Any leakage of product must be notified immediately because loss of containment is often a direct cause of considerable process safety incidents.
- 3.5.7. Fixed barricades - clearly visible for everyone - should be set up when unfastening or removing gratings, steps and similar, that could cause a fall (demarcation with the use of ribbons alone is insufficient). Removal of gratings or floor plates is preferably executed by 2 persons ALWAYS wearing a safety harness.
- 3.5.8. It is strictly forbidden to enter equipment or apparatus at any time, unless there is a work permit to do so, and all conditions of that work permit have been met.
- 3.5.9. FVV 4.12 is the rule when working on heights.
When working on limited heights, inspected ladders can be used provided that a three-point-contact is always guaranteed.
If the three-point-contact cannot be guaranteed, a safety harness has to be worn (e.g. when operating valves, while standing on a ladder).
- 3.5.10. Background radio or television is only permitted upon written approval of the Department Head. Only radios built into motor vehicles are allowed onto the site. Their use is however not permitted.
- 3.5.11. The emergency call number '555' may only be used to report an emergency.

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3.5.12 the use of mobile communication and audio/visual apparatus

	OPEN AIR	ADMINISTRATIVE BUILDINGS	EQUIPMENT ROOMS	CONTROL ROOMS
Radio/TV/DVD (incl. in vehicles)	Use not allowed	Use only allowed upon written approval of Department Head	Use not allowed	Use not allowed
GSM (call function only and limited to <u>professional use</u>)	Use allowed only outside of the Orange Zones	Use allowed	Use not allowed	Use allowed
EX-proof GSM (*) Only upon registration at Inspection Department	Use allowed	Use allowed	Use not allowed	Use allowed
Ex-proof Pager/ page boy	Use allowed			
Photo-video camera	Use only allowed upon written approval of Site Manager	Use only allowed upon written approval of Site Manager	Use not allowed	Use only allowed upon written approval of Site Manager
Portofone (Motorola...)	Use allowed	Use allowed	Use not allowed except using a radio post with fixed antenna mounted outdoors.	Use allowed
Mobile audio-visual apparatus (except fixed mounted in vehicles)	Use not allowed			
Others	Use only allowed upon written approval of Site Manager		Use not allowed	

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(*) Exception: Ex-proof GSM's can be used all over the site when registered at the Inspection Department (ref. INEOS Intranet). EX-proof GSM's need to meet the requirements of standard II 2G Ex ib IIC T4 / II 2D Ex ibD 21 T130°C.

- 3.5.13. Smoking is prohibited, except at places where it is explicitly permitted. Details relating to this are provided in Site Procedure FV 6. Smoking is strongly advised against due to health risks for the smoker and his environment.
- 3.5.14. People who wish to gain access to production units, terminals or laboratories, who are not covered by a work permit and are not operation personnel, should sign in, in the visitors' register
- Such visitors sign in, in the visitors' register of the zone or unit involved.
 - The shift foreman or in his absence the panel operator signs to acknowledge the visitor's presence.
 - Only AFTER this acknowledgement the visitor is permitted to enter the zone or unit involved.
 - After the visit is completed the visitor should sign out.
 - Non-INEOS-personnel, in possession of a visitor's badge **MUST** be accompanied by a member of staff or equivalent person.

Exemption from visitor's register:

- Visit by maintenance personnel.
 - Visit by contractors or non INEOS-personnel accompanied by maintenance or operation personnel.
- 'Visit' means that no work is carried out on equipment.
- 3.5.15. The erection of temporary housings is subject to the approval of INEOS (area responsible) and to initial and periodical inspection (ref. FV1 2.1.2). Special attention must be paid to the use of non-splintering window material e.g. polycarbonate, type Lexan.
- 3.5.16. The use of knives.
For standard use, only 'intrinsically safe' knives are allowed; these knives

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preferably have blades that withdraw automatically when the cutting operation ends, blades that at least need to be powered to remain opened or blades with a shape that prevent accidental contacts. For special tasks, e.g. cutting of electrical cables, dedicated knives can be used. The use of any other types of knives can only be allowed following a formal risk evaluation.

4. REFRESHER OF THESE REGULATIONS WITH EMPLOYEES

These regulations should be gone over with all employees once a year. This must be documented.

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APPENDIX 1: EXCEPTIONS TO THE "GENERAL POLICE ROAD TRAFFIC REGULATIONS".

TITLE V – TECHNICAL REGULATIONS

KB 01.12.1975:

- Article 81.1.1. Technical regulations relating to cars
- Article 81.2. 1-2-3 relating to the presence of a warning triangle, fire extinguisher and a first aid box in motorised vehicles.
- Article 81.4.5. relating to driving caterpillar-tracked vehicles on the public highway.
- Article 82.1.1.1. relating to the presence of front and rear lights on bicycles.
- Article 82.1.3. relating to the presence of a rear light on bike trailers.
- Article 82.2. relating to the presence of a bell on a bicycle.
- Article 82.3.1. relating to the presence of two brakes on a bicycle.

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- Article 23 relating to the compulsory periodic technical inspection of motor vehicles