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PP

TA2024 construction site safety plan



2(32)

Construction site safety plan

TA2024 PP

Building project owner	Borealis Polymers Oy	Satu Kosonen-Kaija
Contractee	Borealis Polymers Oy	Satu Kosonen-Kaija
Main executor	Borealis Polymers Oy	Teemu Honkanen
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3(32)

1. Table of contents

1. Table of contents	3
2. Introduction	6
3. Validity of this plan	6
4. Definitions	7
5. Construction site organization	7
6. HSE- policy, goals and strategy	8
6.1 Construction site tidiness and waste management.....	9
6.2 Dust control in TA-construction site	10
7. Life-saving rules and HSE- requirements	11
8. HSE- communication.....	11
8.1 Language	11
8.2 Communication.....	12
9. Training and orientation	12
9.1 Basic requirements	12
9.2 General training requirements	13
9.3 Turnaround-specific requirements	14
10. Meetings and inspections	14
10.1 Contractor pre-qualification and evaluation	14
10.2 Kick off -meetings	15
10.3 Construction site meetings	15
10.4 Contractors HSE-meetings	15
10.5 Weekly maintenance inspections (HSE tours)	16
10.6 Safety inspections	16
11. Arriving to Kilpilahti and to the construction site.....	16
11.1 Access permit and –control	16
12. HSE-reporting and investigation of incidents	17
12.1 Incidents (accidents, fires, leaks).....	17
12.2 Incident reports (near misses and dangerous conditions)	17



4(32)

12.3 Investigation of incidents..... 17

12.4 Contractors` HSE-plan 18

12.5 Contractors HSE-supervisors..... 20

12.6 Turnaround weekly- and monthly reporting 21

12.7 Contractors turnaround report..... 21

12.8 Manpower report 21

13. Health care 22

 13.1 First aid..... 22

 13.2 Occupational hygiene 22

14. Risk assessment 22

 14.1 Task risk assessment (TRA) 23

 14.1.1 TRA per equipment 23

 14.1.2 TRA per contractor 23

 14.1.3 Very high risk tasks..... 24

 14.2 Participants and approval of task risk assessment 24

 14.3 Workplace checklist 25

 14.4 Take 2 25

 14.5 SIMOPS..... 25

15. Environment..... 26

 15.1 Waste plan 26

16. Work permits 27

17. Safety plan of action (SPA)..... 27

18. Emergencies..... 28

19. Moving in the area 28

20. Guarding..... 28

21. Drug and alcohol policy..... 28

 21.1 Fire and smoking 29

 21.2 Photography and using mobile phone 29

22. Personal protective equipment (PPE)..... 29



5(32)

22.1 Basic protective equipment required during turnaround 29

22.2 Special protective equipment 30

23. Code of practice for infringement cases 31

24. Changes to Construction site safety plan 31



6(32)

2. Introduction

This is the safety plan for Borealis Polymers Oy's maintenance and investment PP turnaround TA2024 prepared in accordance with Government Decree 205/2009 (Government Decree on the safety of construction work 205/2009). In the turnaround, there will be maintenance works and investment projects of different magnitude. There will be also testing of the safety automation and inspections by the authorities.

HSE principles of Borealis:

We believe that success in business requires excellent performance in health, safety and environmental matters.

We continuously reduce the environmental effects of our operations.

We deliver products with a minimal environmental burden.

We require HSE competence, knowledge of and compliance with our procedures from all those working at Borealis.

We learn both from deviations and from best practices and procedures.

Healthy working conditions are the basis of our operations.

Borealis is committed to implementing the guidelines of the **Responsible Care® Global Charter**, the chemical industry's voluntary initiative (start 1985) which aims for continuous improvement in HSE performance, with open and transparent communication amongst stakeholders.

3. Validity of this plan

This safety plan apply to all the parties that work in the TA2024-turnaround site. All pre- or post-turnaround-, shutdown- or start-up related work activities are not turnaround related works or activities. All the previously mentioned activities is



7(32)

related to the normal operation works. This safety document is binding on all parties to the TA2024 turnaround.

4. Definitions

HSE&E: Health, Safety, Environment &Energy

KPI: Key performance Indicator

SPA: Safety plan of actions

TRA : Task risk assessment

Take 2: A tool/ way of work to mitigate last minute risks

Borealis : Borealis Polymers Oy

NES: Neste Engineering Solutions

RAP: Risk Assesst Permit

SIMOPS: Simultaneous operations

SYNERGI: Borealis system for reporting incidents and observations

5. Construction site organization

Borealis is the building project owner and main executor in the TA2024. The persons responsible for Occupational Health co-operation in the construction site are:

- Labour Safety manager: Sanna Ronkainen
- Labour protection representative for blue-collar workers: Petri Taanila
- Labour protection representative for white-collar workers: Marko Klemola

Person responsible for maintaining the information in the safety document is Safety coordinator.



8(32)

6. HSE- policy, goals and strategy



Turnaround HSE-objectives:

TURNAROUND HSE-GOALS

- Zero accidents
- Zero leaks and fires
- Zero environmental incidents
- Good housekeeping
- Active safety observation and reporting
- High work quality

In order to reach these goals everyone in the turnaround is to have a positive safety attitude. An open and active cooperation is required from every party. Everyone must follow the common safety instructions and know the basics of safe working methods.

The most essential operating methods related to the achievement of safety goals are through risk assessment and planning in advance, good orientation to the work and working conditions, reporting of incidents and near misses, HSE tours, engagement



9(32)

tours, comprehensive safety training and implementation of corrective actions of safety reports.

At Borealis, high-risk work are assessed, according to BOY-2015. During turnaround, risk assessments of the work process are carried out for certain tasks. The work permit practice forms a part of comprehensive risk assessment. Borealis trains people to assess smaller risks using the Take 2 principle. When working conditions change, the level of risk assessment has to be re-evaluated.

Safety reports (incidents, near misses and dangerous conditions e.g. environmental issues, leaks) are processed at Borealis in the Synergi system. Safety report forms are available for service providers in locations where work permits are issued and also from the HSE-barracks. Service providers give the safety reports to their Borealis contact in charge who enters the report in the Synergi system. Safety reports are processed immediately, and the progress of processing is monitored in the Synergi system.

HSE-tours are held minimum once a week in the TA-construction site. HSE tours are scheduled in advance. They also act as the weekly maintenance inspections according to Decree 205/2009. Contractor representative must attend to these tours.

Engagement tours are a method used for identifying risky work methods and agreeing on corrective courses of action. Borealis employees are trained in making engagement tours.

6.1 Construction site tidiness and waste management

Good housekeeping in the turnaround area is an important part of safety. Tidiness have to be maintained continuously at the work sites. Contractors are responsible for their own work areas housekeeping and waste management. Borealis will take photos of all work areas before the turnaround and the areas are only be accepted back in the same condition as they were before the turnaround. Borealis reserves the right to interrupt work if the tidiness and order of the area causes risk to the safe performance of work. Unnecessary and discarded materials are to be sort and



10(32)

removed daily. If the work area is left uncleaned Borealis is allowed to charge the contractor for the cleaning costs. Areas will be assessed during weekly HSE-tours.

6.2 Dust control in TA-construction site

Site dust control must be paid attention and dust hazards must be minimized by effective dust control. Dusty work steps and areas have to be identified and risks have to be assessed and effective dust control measures to applied.



11(32)

7. Life-saving rules and HSE- requirements

In Borealis we have a rule that has to obey without a compromise: **“If we can’t do it safely, we don’t do it at all”**. Healthy and safe working environment does not come by chance; we work hard every day to achieve it. Everyone in the turnaround site must comply with Borealis Life Saving Rules.



LIFE-SAVING RULES



 Work Authorization <small>Work with a valid permit when required</small>	 Energy Isolation <small>Verify isolation and zero energy before work begins</small>	 Bypassing Safety Controls <small>Obtain authorization before overriding or disabling safety controls</small>
 Hot Work <small>Control flammables and ignition sources</small>	 Confined Space <small>Obtain authorization before entering a confined space</small>	 Working at Height <small>Protect yourself against a fall when working at height (above 1.8m)</small>
 Safe Mechanical Lifting <small>Plan lifting operations and control the area</small>	 Line of Fire <small>Keep yourself and others out of the line of fire</small>	 Driving <small>Follow safe driving and traffic rules</small>

care for each other, stop work	ask when in doubt	management of change
last-minute risk assessment		safety attitude
trained, competent, fit	<p style="color: orange; font-weight: bold; font-size: small;">THIS IS HOW WE DO THINGS AROUND HERE, ALWAYS, AND EVERYWHERE:</p>	no alcohol and drugs
good house-keeping	personal protective equipment	emergency response plans

If we can't do it safely, we don't do it at all!




The general HSE requirements of Borealis Polymers Oy are delivered to the contractor as an attachment with this safety document.

8. HSE- communication

8.1 Language

The principal language of the project is Finnish. If necessary, the most important HSE documents (this safety plan, TRAs and safety requirements) and TA training is provided in English. The service providers must prepare their own HSE plans and all the other necessary HSE documentation in English or in Finnish and in the mother tongue of their employees. Borealis trains the service providers on its HSE&Q requirements in Finnish and, if necessary, in English. Contractor must procure



12(32)

interpreting services if necessary. During the turnaround contractor must always have a person on the site who is able to interpret from Finnish or English into the mother tongue of the employees. Borealis will make spot checks to verify that the contractor has sufficient language skills.

8.2 Communication

Turnaround information is mainly handled through contractor and project meetings. You can find up-to-date information on turnaround website and the construction site's information board. On a daily basis, the site's SIMOPS meeting discusses current HSE issues, as well as other possible issues that need to be communicated to the site. Every day, when issuing a work permit, the issuer of the work permit reviews if there are any special considerations in the area.

In exceptional situations, communications are taken care of according to the guidelines BOY-5005.

9. Training and orientation

9.1 Basic requirements

All turnaround employees must have the professional skills required for the job and must be able to demonstrate their competence adequately before starting work. A representative of the builder is entitled to check the employees' certificates of vocational aptitude. The contractors are responsible for training their employees on the safe use of equipment under all circumstances. The contractors are responsible for teaching their employees the safety requirements they have been supplied with.

Everyone working on the construction site including subcontractors has to have a thorough orientation to their work and working conditions arranged by their employer. The main implementer will take care that every contractor that has a contract with Borealis working on the construction site has the necessary information of safe working on the site and that they know the hazards and risks and the action needed to control them.



13(32)

9.2 General training requirements

All employees must participate in training required by Borealis Polymers Oy. During the turnaround, all employees must have a valid pass to Kilpilahti with photo ID and keep this visible while on the site. Kilpilahti area training and TA-training are mandatory for everyone in the TA-construction site. Contractors will be provided with a separate training guide to help them familiarize themselves with the training required at the TA-construction site.

The employees must have an Occupational safety card. The following international passes are approved as equivalent to the Finnish occupational safety card:

- SCC Basic Elements of Safety (Netherlands)
- SSG Entre (Sweden) FAS Safe Pass (Ireland) ECITB/CCNSG
- Safety Passport Scheme (UK) SPA Safe Pass (UK)
- CSCS Construction Skills Certification Scheme (UK)
- OSHA Outreach Training Program (USA)

People carrying out, issuing work permits or supervising hot work must have a hot work permit.

Everyone working in the turnaround has to take part in the turnaround training. Turnaround training will be offered primarily in e-learning mode. When having passed the training person gets a turnaround sticker, which has to be put on the helmet. TA training is available in Finnish and English.

Work permit related training will be arranged to the permit acceptors in order to get access to RAP work permit system. Work permit training is available in L2O-system.

In addition to hot work card, all the people working as a safety guard need a special training arranged by Kilpilahti rescue services. Borealis will also organize separate training for all safety guards before turnaround. The trainings required in the turnaround can be found from the contractors training guide.



14(32)

9.3 Turnaround-specific requirements

Borealis arranges an orientation to safety issues for all those who work on the site. Orientation is organised before the turnaround and it is available primarily in e learning. The contractor is responsible for ensuring that all participants in the turnaround work do the orientation training and other necessary trainings well in advance. Elearning can be done through Kilpilahti L2O-system.

Training includes:

- Borealis Life Saving Rules
- Construction site organization
- General safety requirements
- Traffic rules and arrangements in the area
- Personal protective equipment (PPE) required on the site
- Construction site dangers and harm factors
- Alarms, evacuation procedures, meeting places
- Hazards of nitrogen and other chemical's used at the site
- Access control requirements and ID-card requirements
- Work permit procedures

10. Meetings and inspections

10.1 Contractor pre-qualification and evaluation

The purpose of the pre-selection process is to assess the service provider's general competence and suitability to work in accordance with Borealis' HSE requirements. The pre-selection of service providers will be done before sending the call for tenders. Pre-selection can either be a separate step before the call for tenders or it can be part of the call for tender's process. A service provider who has previously worked for Borealis or its owners may be accepted to offer without pre-selection only if:



15(32)

- Work done in the past is comparable to work that is now open for competition
- Work done in the past has been done acceptably less than three years ago
- The ownership, management and work management of the service provider have remained unchanged
- Within three years, the service provider has been assessed with the Borealis contractor audit method and the level has been as defined in this guide

Other service providers must be evaluated to ensure their ability to perform the work in accordance with Borealis HSE standards. The assessment is performed in accordance with the Borealis contractor assessment system.

10.2 Kick off -meetings

Before the turnaround, Borealis will arrange kick-off meetings with contractors. Construction site's safety plan is discussed with special focus on the implementing organisation of the site, responsibilities and requirements as well as hazards and hindrances of the site. The health, safety, environment and quality requirements of the site are discussed at the meeting, and contractors are required to specify their operating models used for ensuring that the requirements are known to contractors' employees working at the site.

10.3 Construction site meetings

During the turnaround there will several meetings on a daily/ weekly bases.

10.4 Contractors HSE-meetings

Contractors must arrange a weekly safety meeting for their employees in order to discuss current safety-related matters, reported incidents and near misses as well as accidents and the level of site safety based on the KPIs agreed. Safety meetings are reported to Borealis in the force notice. Borealis will provide prepared toolbox-talk materials for contractors. These materials are available in TA-home page. If necessary, contractors can also be assigned mandatory safety training during the turnaround.



16(32)

10.5 Weekly maintenance inspections (HSE tours)

During the turnaround, an HSE tour is organised at least once a week. This is a site maintenance inspection, and the issues to inspect include, amongst other things, the general organisation, fall protection, lighting, electrification, cranes, lifting platforms, lifting accessories, scaffolding, access routes and excavations, harmonisation of tasks and other matters of importance to safety. Schedule of HSE-tours can be seen on the site's information board. The contractor's representative is obliged to attend the weekly rounds.

10.6 Safety inspections

Borealis makes both scheduled and unannounced inspections on the site. If the authorities want to make special inspections on the site or participate in the site inspections, the safety coordinator ensures that all parties are informed who need to be notified of an inspection of the authorities and the results thereof.

11. Arriving to Kilpilahti and to the construction site

During the turnaround, traffic control is increased in the area. Driving speeds will be monitored and there will be also additional drug and alcohol testing in the turnaround area. Arriving to Kilpilahti and turnaround area will be marked clear visual BOREALIS TA-signs. Use only the designated and marked routes to ensure safe moving in the area.

11.1 Access permit and –control

A person who has completed the personal ID training is given a personal ID card that must be carried at all times. The personal ID card also functions as an access permit to the area. In the construction site the ID card must be visible at all times. Visitors must have a visitor card and a host approved by production plant. All people entering the turnaround area must register their access at the gates of the turnaround area. Both entrance to the area and exit from it must be registered. Besides that all the people entering construction site area must register their access to the construction site with separate devices. Turnaround site in a restricted construction site and working there requires TA-training. Certificate for the training is a sticker on a helmet:



17(32)



12. HSE-reporting and investigation of incidents

12.1 Incidents (accidents, fires, leaks)

All incidents, even minor ones, have to report immediately to supervisor/issuer of work permit and own supervisor. Serious accidents (such as ones resulting to death or suspected disability) must be reported also to the Occupational Safety and Health Administration the police by the company responsible for the employee. All cases of fire and leaks must be reported immediately. If a dangerous situation, accident, fire or leak has occurred at the work site, work cannot to continue until the turnaround work permit organization has inspected the site and given the permission to continue work.

12.2 Incident reports (near misses and dangerous conditions)

An incident report must be made for all near misses and dangerous conditions to Borealis synergia system. You can find the link to make an observation on the turnaround homepage, the work permit office or from the site's information board. If electronic reporting is not possible, contractors can use the incident report template for reporting incidents. Forms are available from work permit office.

12.3 Investigation of incidents

Borealis investigates all accidents that occur during the turnaround in order to find out their root causes and to determine and implement corrective measures to prevent such incidents in the future. Borealis' safety coordinator is responsible for arranging the investigation. Borealis requires the participation of the contractor and, if necessary, EPCM-partner in the investigation. In case of personal injuries, the



18(32)

injured person must be present at the investigation, and in the case of other accidents, the person witnessing the accident, the contractor's supervision of work and the person in charge of HSE must participate. In case of accidents that have to be reported to the authorities, the safety coordinator coordinates investigational cooperation with the authorities. The investigation materials related to accidents are supplied to the labour safety manager if she/he does not participate in the investigation.

12.4 Contractors` HSE-plan

The contractor must prepare his own HSE plan in Finnish or English and submit it to the turnaround safety coordinator and main implementer for approval. The plan must be submitted 3 months before starting work at the turnaround site, and Borealis must approve the plan before starting work. If the contractor has foreign employees, the plan must be written in the employees' native language or in a language that all persons working at the turnaround site understand. The plan must include the identified risks and the means to minimize them. The HSE plan must contain a description of the contractors' HSE organization.

The HSE-plan should include following items:

1. Project general information, description of the project to which the HSE plan applies.
2. Description of the contractor's HSE organization and contact/responsible persons at the site.
3. The contractor's HSE principles and HSE goals, as well as how the set goals are achieved.
4. Description of the training of the contractor's employees in order to achieve safety goals (e.g. initial training, work safety card, fire work card, personal lift training, documentation of safety training).
5. How safety is a part of daily work (e.g. safety plan-practice SPA for the work task, safety discussions, documentation of documents).



19(32)

6. Safety cooperation at the construction site (e.g. meetings, safety inspections, participation).

7. Coordination of works and consideration of other contractors.

8. Assessment of the risks and hazards affecting the work performed in the contractor's project, as well as related risk management measures:

- Construction work in an ongoing facility (risk of fire/explosion, consideration of Ex areas)
- Fire works
- Work inside the equipment (working in confined spaces)
- Lifting works
- Personnel lifts
- Working at different levels above the ground
- Scaffolding work
- Work with a risk of falling
- Use of chemicals
- Demolition
- Excavation, piling works
- Cold/hot conditions
- Mechanical risks (e.g. those caused by the use of work tools)
- Work with a risk of electrical accidents
- Jobs with a risk of drowning
- Asbestos work and work steps that cause dust
- Large formwork and element works
- Blasting works
- Construction work done while diving

(Furthermore, the tasks that require a separate implementation / safety planning will be assessed with the main implementer)

9. PPE policy

10. Condition monitoring and inspection procedure of used work tools and machines, documentation of documents

11. Cleanliness and order as part of occupational safety



20(32)

12. Waste management

13. First aid readiness (first aid equipment and trained personnel)

14. Operation in an emergency

It is important that the issues presented in the contractor's HSE plan are concretely reflected in the daily work and commitment to achieve the common construction site safety goals.

12.5 Contractors HSE-supervisors

The contractor must have a full-time HSE-supervisor when the strength of the contractor's personnel is 25 people or more. The HSE supervisor must proactively ensure that the set HSE goals are achieved and must be available at the site full-time. The HSE-supervisor, together with the contractor's management, ensures that the Borealis HSE guidelines and plans are followed and:

- Maintains active contact with the contractor's management and Borealis turnaround organization
- Maintains the contractor's HSE plans and necessary documentation
- Guides own company's personnel in HSE matters
- Participate in the weekly HSE rounds of the construction site
- Monitors and ensures that the work to be performed is done safely and in compliance with Borealis' HSEQ guidelines, and reports any deviations
- Ensures that the contractor's personnel have completed the necessary training and that the necessary qualifications of the contractor's personnel are valid
- Assists management in SPA preparation
- Regularly organizes the contractor's HSE meetings (i.e. toolbox) and informs all parties about them
- Takes care of HSEQ reporting to the safety coordinator and main executor
- Collect and document the contractor's safety reports and further report them to the safety coordinator and main executor
- Ensures that HSE information reaches all company employees



21(32)

12.6 Turnaround weekly- and monthly reporting

The safety coordinator is responsible for a weekly summary of accidents and incident reports, safety meetings and the inspections carried out. Engineering partner is responsible for delivering the reports of contractors falling under its responsibility to the safety coordinator. A monthly summary is made of the weekly reports.

12.7 Contractors turnaround report

Contractors shall deliver turnaround report to the safety coordinator or, if so agreed, to NES, containing the following information:

- Hours worked
- Number of accidents (first aid cases, 0 day and accidents leading to alternative work, accidents leading to absence)
- Number of other accidents (ignitions, leaks)
- Number of incident reports
- Subjects and times of safety meetings
- Other relevant health, safety and environment issues

The contractor shall use the Borealis weekly reporting form.

12.8 Manpower report

The contractor shall report the Sedatus system the names of employees working on the site. If foreign employees are used, also the basis of their right to work and the most relevant information concerning employment must be reported. The number of employees report shall also include the names and contact information of management in case of emergencies. In case of foreign companies, the number of employees report shall include the name and contact information of the appointed representative.



22(32)

13. Health care

13.1 First aid

Contractors take care of their own first aid arrangements; contractors must have first aid equipment in their site office and there must be sufficient first aid skilled persons on the site. First aid equipment can also be found in the turnaround area in plant control room, as well as in separately marked places. In emergency and accident situations, call Neste's rescue service.

13.2 Occupational hygiene

All possible exposure risks are assessed and a risk prevention plan is prepared before the beginning of the turnaround. Special attention must be paid to the agreed ways of working concerning the measurement of the contents of chemicals hazardous to health and oxygen before starting to work in confined or partially confined spaces and during the work according to the BOY 31.20.102 F guidelines on working in vessels and confined spaces. The possibility of exposure to dust and protection against it must also be assessed. The noise level during turnaround must also be assessed and contractors must be provided with protection instructions if necessary.

14. Risk assessment

There are several works that include special risks to safety of employees. The equipment's of the process units are emptied and nitrified or steamed in order to make them free of hydrocarbon, for the works in turnaround. Some of the equipment's and vessels will nevertheless stay unemptied and filled with hydrocarbon and these areas will be clearly separated with markings. Part of the drainage can contain fraction of hydrocarbon, so the sensitivity of initiation is relevant the whole turnaround time. Work sites are prepared so that they are in a safe status before work permits are issued and in the work permit the specific safety action needed to work safe are described.

Specific risks related to turnaround are:

- Traffic arrangement that differ from normal situation and the amount of traffic



23(32)

- Demolishing work (cramped working conditions, lifting and transporting, the effect of the work to others working in the area, ignition risk etc.)
- Radiation used in inspections
- Exhaustion related to work overload (the necessary resting period has to be ensured)
- Working on different levels in heights – risk of falling (temporary removal of gratings etc.)
- Risk of exposure to poisonous or corrosive chemicals or dust , risk of inflammable or pyrophoric chemicals
- Inert suffocating gases like nitrogen and different shielding gases
- Potential exposure to noise

For works with a high risk, there will be a separate risk assessment. In addition to Borealis HSEQ-instructions, operating instructions agreed in the work permit and TRA, the contractor must be prepared for the usual construction site and construction hazards, and consider them when planning and implementing the work. The contractor must make a SPA for all work and submit it when the work permit is issued.

14.1 Task risk assessment (TRA)

Task Risk Assessments aim at finding the safest and most systematic way of doing certain high-risk tasks. Borealis will schedule the TRA meetings and invite necessary people. A TRA can be made for different tasks depending on the need.

14.1.1 TRA per equipment

A Task Risk Assessment is made per equipment area when functional equipment assemblies can be assessed.

14.1.2 TRA per contractor

When necessary, a TRA can be made for each contractor specifically.



24(32)

14.1.3 Very high risk tasks

A TRA is drawn up separately for tasks of very high risk such as those related to a specific device, for example. Very high-risk tasks include those listed in the attached BOY.31.10.006.F guidelines and other examples listed here:

- Furnace, column, tank and reactor work (work inside these)
- Working in a nitrogen atmosphere (reactor/tank work)
- So-called hot tap work (connection to be made to a line under pressure)
- Repair/sealing of a leak with extensive effects
- Replacement of cleaning/dryer/catalyst masses
- Hot work including the use of open fire/sparking in the hydrocarbon area (does not apply when the facility is free of hydrocarbons)
- Updating safety logistics
- Working under demanding or special conditions (such as the tip of the flare)
- High-pressure water work over 250 bar (risk assessment according to BOY.31.70.103.F)
- Excavation work
- Deviations from normal methods of segregation of equipment/process parts
- Opening work targets containing pyrophoric substances
- Work on the extruder's hot oil unit
- Heavy lifting or lifting with two cranes
- Work at high altitudes
- Work with risk of exposure to dangerous chemicals

14.2 Participants and approval of task risk assessment

The main contractor appoints a person in charge of TRAs. Participants in the risk assessment are the maintenance supervisor and, if necessary, the person issuing work permits for the area to which the TRA applies, the contractor's supervision of work and the person in charge of HSE matters appointed by the contractor. The contractor's supervision of work must ensure that the TRA is explained clearly to



25(32)

those performing the work. It is recommended that the contractor deliver the TRA signed by its employees to the supervisor appointed by Borealis.

14.3 Workplace checklist

Work place checklist is filled in order to detect any flaws or deficiencies in the work location before starting the work. The inspection therefore serves to ensure that the work location is safe for those working there as well as to other people, the environment and equipment in the location.

A separate written Work place checklist is always done in the case of very high-risk work tasks. A written inspection may also be carried out for work without a very high risk if the person issuing the work permit considers it necessary. At the very least, a representative of the location (the person issuing the work permit or a person authorised by them, such as an operator) as well as representatives of the party carrying out the work shall participate in the inspection of the work location. It is recommended that the supervisor of work also participate in the inspection whenever possible. The persons carrying out the inspection shall sign the form.

A written work place checklist is done using an inspection form. The inspection is done at the work location before the work permit enters into force.

14.4 Take 2/ SPA

One of the risk management methods Borealis uses is the Take 2 principle aimed at minimising risks during work. Borealis trains its own staff according to this operating model and also emphasises the same philosophy in the turnaround training for contractors. Contractors are required to make a Safety Plan of action (SPA) for all work subject to a work permit.

14.5 SIMOPS

The principle of SIMOPS is to manage the different tasks of the construction site and their possible overlaps. The main principle is the prevention of dangers and harms, and the coordination of works to ensure their smoothness and safety. During turnaround, SIMOPS works as a daily tool for planning the timing, duration and location of work and work phases. With the help of SIMOPS, the work performed in



26(32)

the area are visualized, so possible overlaps can be detected and a visual situational picture of the area can be obtained. The SIMOPS meeting is held daily during the turnaround.

15. Environment

Environmental aspects during turnaround

Borealis is committed to decrease any harmful environmental impacts. We are committed to act according to ISO 14001 requirements. This includes also all TA-sites. All contractors are required to comply with these rules and requirements.

A possible leak

In case of a leak, contain the leakage and immediately inform the plant staff. Absorptive materials and drain cover mats are available at the plant for use in case of leakage. During the turnaround, it is prohibited to release any substances into Borealis sewers without a specific permission from the plant staff.

Water containing chemicals, such as water used for the washing of equipment or oil, may not be released onto the ground. All chemical and oil spills must be contained without delay and may not be allowed into the sewer.

15.1 Waste plan

Borealis prepares a plan for the sorting and disposal of waste created during the turnaround. The contractor is responsible for ensuring that their employees collect the waste generated by their operations and sort it using the containers provided by Borealis. Specific arrangements are made for very high-risk waste or other waste requiring special actions. Should the contractor fail to clean the work location, Borealis is entitled to invoice the contractor for the cleaning costs. If you don't know where to put the waste generated, ask the plant staff for help. A load which is sorted incorrectly is processed based on the most hazardous type of waste included in it.



27(32)

16. Work permits

All work done by a contractor during a turnaround is subject to a work permit. The work permits are written by a person appointed by Borealis according to the BOY-2015. It is the contractor's responsibility to ensure that all employees understand the terms of the work permit and follow regulations and guidelines in their work. Before applying for a work permit, the contractor shall ensure that they have all the necessary permits and certificates, such as a written lifting plan and a crane erection certificate, permission from the fire brigade to use fire water or a tank certificate.

17. Safety plan of action (SPA)

Safety Plan of Action is task-related task plan document to ensure appropriate HSE preparations in each task before it is commenced. The purpose of the SPA is to ensure that the employees are trained on the risks and safety measures related to the task to be started and that a common safety plan is prepared for the task by all those participating the work. The contractor's supervision of work discusses the task at hand, the TRA and the work place check list with the employees and reviews the terms of the work permit after receiving it. The risks of one task (or group of tasks) are recorded in one form. The related safety plans are prepared and the resources ensuring safety and the safety measures to be used are agreed.

The tasks must be reviewed at a sufficiently meaningful level (tasks, risks and other safety measures must form a reasonable package for which a detailed plan can be made). The form is signed by the supervisor and the employees.

When a new employee comes to the site, the tasks are discussed and the conditions of work are reviewed with them (with an experienced employee on the site, for example). After the orientation, the SPA is reviewed (along with the preceding TRAs, etc.) and signed before the new employee can start working independently.

If the task changes substantially, a completely new plan must be made. In case of small changes, the plan must be revised.

The filled-in safety plan of action must be available for viewing on the site for the duration of the work. SPAs are reviewed with different methods.



28(32)

18. Emergencies

Operation in cases of emergency is described in the General safety ruler for Kilpilahti that is distributed to all those working at Kilpilahti during the safety training.

Operations in case of emergency are revised in the turnaround safety training, and the meeting points in the area are also indicated. The alarm number for the Neste - Rescue Services is 010 4582222. The Neste – Rescue Services must be alerted in all cases of fire in order to ensure that the fire is extinguished safely.

19. Moving in the area

All people entering the turnaround area must register their access at the gates of the turnaround area using the ID card. Both entrance to the area and exit from it must be registered. Access and moving in the area requires always a permit. Normal driving permits are not valid in the area during turnaround. You must apply a special permit for vehicles which is valid during turnaround. Bicycles are forbidden inside the process area (ISBL-area).

20. Guarding

According to a degree (1104/2013) issued pursuant to the Police Act (872/2011), it is forbidden to access the Kilpilahti industrial area without authorization, to stay there, or to start an open fire. During the turnaround security, company will make random vehicle checks. Service providers are asked to mark/ stamp their own machines and tools clearly by the company name.

21. Drug and alcohol policy

Consuming alcohol or any other intoxicants and turning up under their influence in the turnaround area is strictly forbidden. Intoxicated people are a danger to themselves and their co-workers. This is why we apply zero tolerance to intoxicants and carry out drug tests.



29(32)

21.1 Fire and smoking

Bringing matches or lighters of any kind into the turnaround area is forbidden. Using lighters and handling any kind of device capable of igniting fire is forbidden in the turnaround area without written permit. Smoking is allowed in designated smoking areas only. In addition, bringing any kind of firearms or explosives into the processing and plant area is forbidden without permission.

21.2 Photography and using mobile phone

Taking photographs is strictly prohibited in the fenced-in processing and plant area without a permit and a separate training. A permit is granted by the plant manager or persons authorized by the manager. Publishing the photographic material is allowed only by written permit of the aforementioned persons. Using non-ex-protected mobile phones in the turnaround area is allowed only during a strictly specified period. Check the info from the turnaround area info-boards before using your phone.

22. Personal protective equipment (PPE)

When opening the flanges of tanks/ colons and pipes for the first time, you must wear the PPE described in BOY-2007.

22.1 Basic protective equipment required during turnaround

- An industrial helmet with the names of the person and the corresponding company on it, according to standard EN-397 with a maximum weight of 500 grams. Helmet chinstrap EN 397.
- Eye protectors with side shields according to standard EN-166.
- Safety footwear according to standard EN-345, meeting the requirements of safety class S3 (toe shield, protection against penetration by nails, antistatic, patterned flexible sole).
- Protective clothing with long sleeves meeting the requirements of standard EN ISO 11612, A1, B1, C1. If the protective clothing is not high-visibility i.e. does not meet the requirements of EN 471 class 1 at the minimum, the contractors must use a high-visibility vest.



30(32)

- Hearing protection must be used in areas where the noise level is above 85 dB. The hearing protection must meet the requirements of EN 352.
- Work gloves are used as required by the task. All work gloves must be EN 420 and EN 388 category 2-compliant. When handling chemicals, chemical gloves classified for handling the chemical in question according to EN 374-1 are used. The service provider has to evaluate work-related risks to hands and choose working gloves that protect against these hazards. E.g. cut-resistant gloves are used in tasks that involve a risk of injuries from sharp objects, such as blades or thin metal sheets.
- Impact protection gloves (EN 388 classification P) must be carried when working at Borealis turnaround sites and must be used if the work task is such that there is a risk to the hands that can be protected with impact protection gloves. In addition, the finger saver has to be used in opening works when holding the ring wrench.
- Safety harness must be used when using a man lift (hoist), installing scaffolding or working in other conditions with a risk of falling. Safety harness must always be used and properly attached, when it is possible to fall **1,8** meters and the risk of falling cannot be eliminated by other proper means (guard rails, barriers, etc.). Safety harness must be continuously attached.
- At the construction site, contractor personnel is mandatory to have a valid illustrated identity card and admitted tax number issued by the client.

22.2 Special protective equipment

The person issuing the work permits specifies the required special protective equipment when writing the permit. The contractor must know what special protective equipment is required for their work. They must also provide the employees with the required equipment and be familiar with the level of protection offered by the equipment.



31(32)

23. Code of practice for infringement cases

This instruction describes the procedures and sanctions for non-compliance with Borealis' HSE regulations. These instructions applies both to Borealis employees and service providers. Code of practice have three steps. In case of aggravated cases the three steps are not necessary followed.

1. On the first occasion the reprimand of the offender and his/her supervisor. All the cases will be recorded to Synergi.
2. On the second occasion ,a written warning and notification to a representative of the company's` management
3. On the third occasion, severe action such as an access ban or driving ban. In case of sever violations of regulations and guidelines, the person will be immediately removed from the area and the ID card will be confiscated. It is possible that the service agreement will be terminated and a waiting period will set.

Aggravated violation cases might follow a straight removal from the area and ID card confiscation. These cases could e.g. be:

- Intentional neglecting of HSE regulations and rules
- Criminal acts
- Alcohol or other substance violation cases
- Physical or oral violence
- Neglect in performing one's work duties

Borealis have zero tolerance for all sexual harassment cases and all the cases will be investigated.

24. Changes to Construction site safety plan

The Construction HSE plan is a live document and shall be revised as required e.g. in case of Borealis internal instruction changes or other changes during Turnaround.



32(32)

Update will be made by Turnaround Safety Coordinator. Updated plan is always available in Turnaround web-page and also on the construction site info-board.