PUBLIC COMPANY ORLEN LIETUVA

APPROVED BY
7 August 2024
Order No TV1(1.2-1)-2024-0361 of
Director of Quality, Labour Safety
and Environmental Control

OCCUPATIONAL HEALTH AND SAFETY PROCEDURE BDS-6/2 WORK IN CONFINED SPACES

I. GENERAL

Purpose and Scope of Application

1. Occupational Safety and Health Procedure BDS-6/2 'Work in Confined Spaces' (hereinafter, the Procedure) defines occupational health and safety (OHS) requirements applicable to works performed in confined spaces at Public Company ORLEN Lietuva (hereinafter, the Company).

2. The Procedure shall apply to all employees of the Company and contractors (to the extent required by a relevant contract concluded with the Company) supervising works carried out in confined spaces in the Company.

II. REFERENCES

3. This Procedure has been developed in line with effective revisions of the following documents:

3.1. Lithuanian Hygiene Norm HN 23:2011 - Limit Values of Occupational Exposure to Chemicals. General Requirements for Measurements and Exposure Assessments' approved by the Minister of Health and Minister of Social Security and Labor;

3.2. PKN ORLEN S.A. Standard S1 ‘Permits to perform hazardous work (including fire hazards)’;

3.3. PKN ORLEN S.A. Standard S3 ‘Works in Confined Spaces’.

III. TERMS, DEFINITIONS AND ABBREVIATIONS

4. Terms and their definitions:

Confined space attendant (attendant) – employee assigned to perform all duties of confined space attendant and named in respective entry/exit sheet (Register for confined space entry and exit - form provided in Annex 1 hereto).

Entry point – a place where workers enter or exit a confined space, e.g. manways, ports, doors, etc.

Occupational exposure limit (OEL) – the limit of the time-weighted average of the concentration of a chemical agent in the air within the breathing zone of a worker in relation to a specified reference period. Occupational exposure limits are presented in Lithuanian Hygiene Norm HN 23:2011 [3.1].

Confined space – space that is large enough and so configured that an employee can bodily enter and perform work but it has limited or restricted means for entry or exit and is not designed for continuous employee occupancy. Confined spaces include towers, reactors, vessels, heaters, wells, tanks, pits of the depth of two meters and more, etc.

Other terms used herein shall be as defined in the Company’s OHS Procedure BDS-6E *Issuing Hazardous Work E-Permits* and OHS Procedure BDS-14E *Issuing Hazardous Work E-Instructions*. Works in confined spaces hereunder in the Refinery and Pipelines and Terminal Operations Subdivision shall require a permit and in Power Plant shall require an instruction.

IV. PREPARATION OF CONFINED SPACES

5. Confined space must be isolated with EID from the existing or potential hazardous energy as required by the OHS Procedure BDS-29 'Equipment Isolation'.

6. All petroleum products or other chemical substances must be removed from confined space to reduce their concentrations to limits established in Article 14 hereof. For this purpose the vessel is flushed with water, steamed, purged with inert gas, etc.

7. If residues removed from confined space contain or may contain any pyrophoric compounds, they must be regularly watered until disposed of.

8. A warning sign 'Caution! Entry by permit only!' must be placed in a visible place near each open entry into confined space (manhole, hatch, door or alike). Manager of organizational unit issuing a confined space work permit must make sure that such sign is posted immediately after opening the confined space entry and is not removed for as long as it stays open.

9. If there is a risk of falling into the confined space through its open entry, it must be enclosed in accordance with the Company OHS Procedure BDS-20 'Enclosures'.

10. Depending on the nature of work performed, effective ventilation (natural or mechanical) must provided to ensure that the air in the confined space always complies with the established requirements.

11. When selecting a location for ventilator, it is essential that the ventilator is far enough from any potential sources of gas that could be drawn into the confined space.

12. Ventilator is positioned to blow air into the bottom of confined space.

V. AIR MONITORING AND REQUIREMENTS FOR CONCENTRATIONS OF SUBSTANCES

13. Before starting or resuming works in a confined space, air must be sampled next to the entry and inside the confined space to determine the concentrations of oxygen, explosive and hazardous substances as required by the Company OHS Procedure BDS-12 'Use of Portable Gas Analyzers or Detectors'. Temperature must be measured inside the confined space before the start of work.

14. Personal respiratory protection equipment does not have to be used in confined spaces if:

14.1. Oxygen concentration in the air is not less than 19.5 % and not higher than 23.5 %;

14.2. Concentrations of harmful substances that may be present in confined space do not exceed long-term exposure limits;

14.3. Concentrations of explosive substances in the confined space are 0 % of LEL;

14.4. Confined space is free from oil products, deposits and other impurities, which could release harmful chemical substances if moved.

15. It is allowed to enter the confined space when temperature there is not higher than 40^{o}C.

16. Confined spaces may not be entered (irrespective of the type of personal respiratory protection equipment used) when:

16.1. Hydrogen sulfide concentration in the confined space exceeds 14 mg/m^3 (10 ppm);

16.2. Concentrations of explosive substances exceed 10 % of LEL.

17. Continuous air monitoring must be ensured while working in a confined space using a gas analyzer for continuous analysis of the selected parameters of work environment, with audible warning of deviations from the values set. Works in humidity (e.g. pressure cleaning/washing) in confined space may be performed without continuous air monitoring with gas analyzer if allowed by the permit/instruction issuer.

VI. REQUIREMENTS DURING WORKS

18. Permit/instruction for work in confined space must be issued to one Work Manager at the same time. Issuing of permits/instructions for work in confined space at the same time for the employees of a few Work Managers is allowed if upon evaluation of possible hazards related to the work performed by each Work Manager the relevant measures are planned and implemented to

ensure safety of all employees working inside the confined space (e.g., work places located at different heights within a confined space have partitions protecting against potential fall of materials, parts and other items; the performed work does not pose a risk of falling items and other risks, etc.). In such cases the evaluation must be performed by the Permit/Instruction Issuer together with Work Coordinator and Work Managers, and the planned measures must be listed in the permits/instructions issued to Work Managers.

19. If during the performance of works in confined space certain employees must access the confined space in order to conduct inspections/checks, the Work Manager must temporarily halt the work performed in confined space, instruct these employees and familiarize them with the results of work environment air tests, with the required personal protective equipment, and must ask them to sign in the permit/instruction. Prior to entering the confined space, employees must be registered by a confined space attendant and follow his instructions.

20. If a single confined space attendant is not able to watch all workers entering a confined space or if the confined space has several entries, a sufficient number of attendants must be appointed to ensure the monitoring of all entries. Each attendant must fill out the entry/exit sheet.

21. Only workers trained to use self-contained breathing protection equipment are allowed to work in wastewater disposal wells (hereinafter – the sewer systems).

22. Working in sewer systems does no require isolating them from hazardous energy sources.

23. Sewer system entry is not permitted without self-contained respiratory protection (e.g. self-contained breathing apparatus) and verified and operating gas analyzer for continuous monitoring of gas concentrations.

24. Electrical equipment and tools used in confined spaces must comply with the requirements of Procedure BE-2 for Operating Electrified Machinery, Handheld Electrical Equipment and Tools, Domestic Electric Appliances and Portable Lights.

25. Total light intensity in a confined space must be at least 50 lx.

26. Confined space evacuation exits must be visible (where required marked with signs, additionally illuminated, etc.), workers must be provided with the possibility of quick and safe evacuation from all workplaces in case of hazard.

27. Hot works in a confined space are subject to a hot work permit.

28. CO_2 fire extinguisher must be at the place of hot works in the confined space. It is prohibited to use powder extinguishers in confined spaces.

29. Worker entering the confined space must wear safety harness and have attached signal/rescue rope. One end of signal/rescue rope is attached to the safety harness on the employee's back, the other end – to a fixed support outside the confined space. If several workers work within the same level of confined space, one signal/rescue rope is sufficient to rescue a worker when needed. In such case one end of the rope must be next to the workers, the other end is attached to a fixed support outside the confined space.

30. Safety harness and signal/rescue ropes may not be used in confined spaces the design/structure of which prevents the retrieval of workers (in distillation, absorption towers, heaters) as well as in excavations with landfall protection, entry and exit equipment installed in accordance with the Company OHS Procedure BDS-31 'Earth works'.

31. If rescue plan provides for retrieval through the top opening of confined space, lifting equipment (tripod, hoist, etc.) must be installed above the opening or there must be a sufficient number of standby employees ready to retrieve the workers from the confined space. If the plan provides for retrieval through the side entry, it must specify other rescue equipment such as sloped (inclined) ducts, rescue ropes, etc.

VII. EMERGENCY PROCEDURES

32. In case of release of hazardous (toxic, flammable, highly flammable) substances, fire, accident or any another incident, activated emergency alarm or gas detector (analyzer) and if instructed by the confined space attendant, work in confined space must be immediately stopped, all ignition sources (in case of hot works) must be turned off/suppressed and workers must immediately vacate the confined space.

33. All incidents must be immediately reported by the workers, work managers work supervisors and work coordinators to the Company's dispatcher by phone number 3333 (for fixed-line calls) or +370 443 9333 (for any calls) and the staff of the unit where the works were carried out. If works are performed in Būtingė Terminal, all incidents/accidents must be immediately reported by the employees supervising and/or performing work in confined space to Shift Supervisor of Terminal Operations Group by phone +370 443 93459 or +370 686 78112.

VIII. FINAL PROVISIONS

34. Responsibility for periodic review and updating of the Procedure, if needed, shall lie with Director of Quality, Labour Safety and Environmental Control of the Company.

IX. ANNEXES

Annex 1. Register for confined space entry and exit (sample form)

Prepared by
Control and Prevention Group Manager
Egidijus Luomanas

(Sample form)

Register for confined space entry and exit time

Date _____ Vessel and its No. _____

Confined Space Attendant (-s) _____ from _____ to _____
(Full name, job title) (Watch time)

_____ from _____ to _____

_____ from _____ to _____

Worker name and job title	Time of entry/exit					

Reverse side of sheet

Confined space attendant must:

- Stay outside the confined space (near the entry point or in some other place that is best to watch the workers) all the time while workers are inside the confined space;
- Count (and always know) the number of workers inside the confined space and fill this entry/exit sheet;
- Maintain communication with the workers and monitor their actions;
- Instruct the workers to evacuate from confined space:
- Upon noticing any inadmissible working conditions (other than specified in permit);
- After noticing any signs of abnormal behavior (symptoms of weakness and fatigue, attempts to remove face mask, etc.);
- After noticing any danger outside the confined space that can put at risk the workers inside the equipment;
- In case of fire, emergency or any other incident, emergency alarm or activated gas analyzer;
- When confined space attendant cannot carry his duties properly and safely;
- Not perform any other actions that may impair the performance of direct duties – control and safeguard the workers in the confined space.
- Confined space attendants may not enter the confined space during rescue works.
- If workers cannot evacuate from the vessel themselves, confined space attendant must use the available communication means to call the Dispatcher of Production Control Department of the Company by telephone (8 443) 93333 who will call out rescue services (fire brigade, first aid) to the accident site. If works are performed in Būtingė Terminal, the confined space attendant must immediately report to Shift Supervisor of Terminal Operations Group by phone +370 443 93459 or +370 686 78112.