

## Interpretation Note 14-01 Hot Work and/or Unprotected Flame or Sources of Ignition on Petroleum Installations

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### **Foreword**

The onus is on those with statutory responsibilities to comply with the *Accord Acts*<sup>1</sup> and Regulations made thereunder and to demonstrate to the Board the adequacy and effectiveness of the methods employed to achieve compliance.

This interpretation note is not a statutory instrument and does not prevent those with statutory responsibilities from proposing alternative interpretations that demonstrate regulatory compliance. Such alternatives will be considered on a case-by-case basis by the Board. It is recommended that in proposing alternative interpretations, those with statutory responsibilities assess any associated risk and hazards and how they will be addressed.

### **Purpose**

The purpose of this Interpretation Note is to provide operators with additional information around the practice and occurrence of hot work, unprotected flame and ignition sources on petroleum installations.

Subsection 8(2) of the *Newfoundland Offshore Petroleum Installations Regulations* specifies that:

*No person shall create or cause to be created any unprotected flame or source of ignition within 50 m of a well, an oil storage tank or other source of ignitable vapour.*

Reference shall also be made to subsections 8(3), (4) and (5) and the definition of “flame-type equipment” as specified in the *Newfoundland Offshore Petroleum Installations Regulations* and Part 2 Section 138, 139, and 140 and the definition of “hot work” as specified in the *Canada-Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations*.

The creation of an unprotected flame or source of ignition is considered to be “hot work” or “non-flame hot work”. This includes welding, burning, riveting, drilling, grinding, chipping or any other work where a flame is used or sparks are produced. Sources of ignition can also include hot surfaces, hot gases, electrical apparatus, static electricity, and so forth. Any work performed needs to consider all possible hazards.

No work may be performed on any petroleum installation (including any work within the confines of any designated welding shop, work shop or any other hazardous area) which creates an unprotected flame or ignition source that is within 50 m of any well, oil

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<sup>1</sup> The *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act*, S.C. 1987, c. 3 and the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act*, RSNL1990 c. C-2. For ease of reference, citations in this Interpretation Note are to the federal version.

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storage tank or other source of ignitable vapour unless it is protected. Operators are also required to be familiar with and adhere to the specific requirements for the placement or operation of flame-type equipment within 25 m of any well, oil storage tank, process vessel or other source of ignitable vapour.

Any departure from the regulations may only be done following an approval or exemption from the Chief Safety Officer on the basis of providing an equivalent or satisfactory level of safety. The regulatory equivalency process, also known as the RQ or RQF process, is described on the Board's website: <http://www.cnlopb.ca>.

### ***Welding Shops***

Welding shops shall be located outside designated hazardous areas and may be located within 50 m from any well, oil storage tank or other source of ignitable vapour provided it is protected and not within 25 m of any well, oil storage tank or other source of ignitable vapour. All such shops must be designed and constructed to include fire rated divisions, be positively pressurized or located within a positively pressurized area, have appropriate fire suppression, emergency shutdown, gas detection, and other types of protection as required by the legislation. The legislation further requires that the integrity of these protective systems be maintained and also requires that adequate personal protection to individuals performing this work is provided.

### ***Hazardous Areas***

Using flames or other source of ignition is prohibited within "hazardous areas". Hazardous areas are defined in the standard referenced under subsection 2(2) of the *Newfoundland Offshore Petroleum Installations Regulations*. Consequently, work in these areas must be deferred until such time as the location in question can be demonstrated to be no longer a hazardous area. This requires removing all potential sources of ignitable vapour from the area.

- For a production installation, this would normally require a complete or partial shutdown of process operations.
- For a drilling installation, using flames or other sources of ignition outside positively pressurized areas shall not be conducted when drilling conductor or surface hole (shallow gas is a hazard). When drilling through hydrocarbon bearing formations or when abnormal background gas is present in drilling fluid returns, this type of work is to be deferred until the drilling installation is either disconnected from the well or the well(s) is isolated at or below the wellhead with active monitoring in place to confirm the well(s) remain isolated.

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### ***Non - Hazardous Areas***

Using flames or other source of ignition outside hazardous areas but within 50 m of any well, oil storage tank or other source of ignitable vapour that cannot be deferred to periods of shutdown or turn-around may only proceed if the operator has demonstrated to the Chief Safety Officer that physical and/or administrative systems are in place to address the risk associated with the potential source of ignitable gas or vapour and that adequate protection is provided to prevent ignition (e.g. use of pressurized enclosures).

For use of flames or other sources of ignition in non-hazardous areas, Operators must satisfy the Chief Safety Officer that the following will apply:

- Adequate and appropriate criteria for non-deferral of the work
- Documented risk assessment criteria and processes specifically related to the work
- Standard precautions for the work as well as area, hazard and risk specific precautions
- Work permit and control of work management systems for planning, documenting, controlling and communicating issues related to the work
- Other precautions and controls as may be required

Risk assessments should assess the probability of ignitable vapour and all other matters that may impact upon the type of work being conducted (e.g. the impact of ongoing operations, weather and sea state).

Hot work in areas where a flammable atmosphere could migrate may only be conducted in appropriate pressurized enclosures.

For further information on these matters, please contact the C-NLOPB at [information@cnlopb.ca](mailto:information@cnlopb.ca).