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Instruction
for

Non-Hazardous Gas Line Break Sub-Permit

REVISION

Rev No.	DCN No.	Change Summary	Release Date	DCN Initiator	Document Owner
1	DCN0833	Initial Release	7-19-12	C. Towle	T. Moseman

Prior revision history, if applicable, is available from the Document Control Office.

1 PURPOSE AND SCOPE

1.1 Purpose

1.1.1 The purpose of this procedure is to outline how and when to the use the Non-Hazardous Gas Line Break Sub-Permit (CFM-00011-F1). This procedure identifies the non-hazardous gasses with cross-sensitivity TGMS sensor issues.

1.1.2 This document is to ensure that all work activities requiring breaking a non-hazardous gas line within the cleanroom at the College of Nanoscale Science and Engineering (CNSE) facility are:

1. Communicated and coordinated with all affected parties (i.e. tenants, departments, contractors, system owners, etc.)
2. Performed in accordance with this protocol to ensure the Cleanroom Operation is not interrupted with false sensor readings due to non-hazardous gasses which are cross-sensitive to existing TGMS sensors.

1.2 Scope

1.2.1 This sub-permit form and procedure is required for existing lines to ensure proper procedures have taken place to draw the chemical out of the line prior to breaking the connections.

1.2.2 This sub-permit is to be posted at the sight of work with all required signatures completed before work can be performed.

2 DEFINITIONS

2.1 **Field Construction Manager:** Person responsible for managing/overseeing the activities, in the cleanroom, of the contractor / sub-contractor. Such as, M & W Construction Manager, CNSE Project Engineer/Project Manager, etc.

2.2 **Administrative Locks:** Also known as: Process Control, Custodial, Restricted Access or Out of Service locks: These locks are used to prevent injury or damage to property, a “Do Not Operate” or “Caution” tag, must be attached to equipment or tools that are out of service (i.e. defective and must be repaired or replaced; in a disassembled state, or not ready for use). The reasons for taking the equipment or tool out of service must be clearly written on the tag. **NOTE:** Do not use Locks or Tags that have been identified for use in a Lockout /Tagout program.

2.3 **Non-Hazardous Gases with Cross-Sensitivity Issues**: C3F8 Octafluoropropane, CF4 Tetrafluoromethane, SF6 Sulfer Hexafluoride, C4F8 Octafluorocyclobutane, and CHF3 Trifluoromethane.

3 RESPONSIBILITIES

3.1 Compliance with this procedure is the responsibility of the contractor, tenant or CNSE employee responsible for breaking the non-hazardous gas connection.

4 ASSOCIATED DOCUMENTS

4.1 **CFM-00004-F1** - Work Authorization Permit

4.2 **CFM-00011-F1** - Non-Hazardous Gas Line Break Sub-Permit

4.3 **Piping and Instrument Drawings (P & IDs):** Required to show beginning through end of line to be opened along with markups showing location of locks and where the line break will occur.

5 EQUIPMENT

5.1 **Administrative Locks**

5.2 Use of snorkel device will be required, (when available), to control any remaining vapors emitted during work where ever one exists.

6 PROCEDURE

6.1 It is the responsibility of the Field Construction Manager to arrange and complete a walk down of the line to be opened up with the Tool Owner and the Contractor's Foreman before any work is to be complete. This walk through is to be performed after the tool owner has evacuated the line and all administrative locks are in place.

6.2 This walk down is to review and identify all valves in the lines, verify that valves are in the correct position, ensure all administrative locks are in place and to review location where the line is to be broken.

6.3 It is the Field Construction Manager responsibility to provide a P&ID during the walk down marking the location of the line break and highlighting the section of line to be evacuated along with the location of all the administrative locks. (Including verify the signatures of who applied the administrative locks on sub-permit.)

6.3.1 Administrative locks signatures required include: Air Liquide, Contractor, and Tenant Tool Owner.

6.4 After line walkthrough is complete, and any outstanding issues are resolved. The Field Construction Manager, Contractor's Foreman and Tenant Tool Owner will sign the Non-Hazardous Gas Line Break Sub-Permit form.

6.5 The Field Construction Manager will contact the System Owner for review and signature.

6.6 After all the steps above are complete the Non-Hazardous Gas Line Break Sub-Permit is to be posted at work location with the P & ID attached before work is started.

6.7 As an extra precaution of any residuals in the line, maintenance exhaust will be used when available.

7 SUNY PERMIT PROCEDURE

7.1 Additional Concerns for SUNY/CNSE Personnel

7.1.1 Any additional job requirements for CNSE Personnel will be listed in this section and will need to be complied with before execution of job.

7.2 System Owner Authorization

7.2.1 System owner approvals are made in this section and are required before work can commence. This sub-permit is not valid without signatures AND a valid Work Permit being submitted and approved.

8 RECORDS

8.1 Completed "Non-Hazardous Gas Line Break Sub-Permits" shall be kept on file by the Facilities Department for at least three years.