We create chemistry **Beaumont Site Procedure**	**Title**: Management of Open-Ended Lines		
	Function: Health and Safety		
	No.: BMEHS-002.043		**Page:** 1 of 7
	Reviewed: 12/20	**Effective:** 12/20	**Supersedes:** Rev 002
Preparer: EH&S Team Member	**Owner: Health and Safety Manager**		**Approver: Site Manager**

Revision Number	Revision Description	Revised By	Revision Date
003	Added section 4.5. Creating and Closing OELs inside a System LO/TO During a Turnaround	J. Gonzales	6/7/2021
002	3 Year Cycle Review. Title Block Changes, Formatting Changes	J. Gonzales	12/15/2020
001	Add WTL, T&T system; PSA 26	D. Smith	10/16/17
New	Original issue of document:		06/2016

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1. PURPOSE

The purpose of this procedure is to prevent a loss of primary containment of process materials to the environment from an open bleed valve, air gapped piping, or improperly capped/plugged valve.

This procedure is to specify site wide requirements for securing, managing open ended lines (tracking) and walking the line. Managing open ended lines and walking the line are important components to ensure the energy in the process is being controlled to prevent exposure to personnel, the community, and the environment. BASF Corporation, Beaumont site, is committed to the safe operation of its facility. This document describes the practices used to ensure these principles are followed at the Beaumont site.

2. DEFINITIONS

2.1. Bleed Valve
A valve used to drain pressure out of a piping system or piece of equipment. Can be used as a high point vent or low point drain.

2.2. Exclusive Control
Within 10 feet, on the same level, and within a straight line of sight.

2.3. Isolation
The process of preparing and positioning of equipment or components of equipment in order to segregate them from Hazardous Energy Sources. Energy isolation must be performed in accordance with BMEHS-002.005, LT&T.

2.4. Procedure of High Quality
Procedure used that requires signatures for checklist steps and verifications.

2.5. Open Ended Line (OEL)
Any connection point on a piping system or piece of equipment that if left open or uncapped, would lead to a spill or release

2.6. Open Ended Line Tag
Tag used to identify Open Ended lines in the Field.

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3. SCOPE

The Beaumont site procedure provides an administrative system of tagging and tracking open connection points to the atmosphere for maintenance, operations, special activities, receiving and loading process materials. This includes all valves, caps, plugs, and blind flanges that if left open would result in a release.

All valves that can discharge process material to the environment must be closed and properly plugged per design or blinded during normal operations to ensure primary containment and to comply with regulatory requirements.

Tag and track all valves, caps, plugs, and blind flanges that, if left open to the atmosphere, could result in a release unless these connection points are under exclusive control.

The following process systems are exempt from this procedure:

- Open ended lines on water or steam hoses when the water or steam must remain on and drain from the line to prevent the line from freezing.
- Flex hoses that are open on both ends and drained when not in use.
- Compressed air lines
- Nitrogen
- Plant Air and Instrument Air
- Cooling Water
- Fire Water
- Steam and Condensate
- Potable Water

4. PROCEDURE

4.1. Supporting Open Ended Lines, OEL

4.1.1. Open ended lines, OEL, are to be identified by painting the terminal end. This is to facilitate the prompt identification of a missing cap or plug

4.1.2. When any open-ended line is not in use, the line must be secured via either cap or plug

4.1.3. When sample ports are not in use, the port must be plugged or double blocked.

4.2. Creating and Closing OELs that are required for or part of an Isolation.

4.2.1. An OEL that is required as part of an isolation will be tagged and tracked using an energy isolation tag and tracked by being included in the isolation documentation. (BMEHS-002.005, LT&T))

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4.2.2. As soon as the OEL is created, a LT&T tag will be attached to the valve.

4.2.3. OEL's that are tracked using an LT&T tag must be treated the same as any other component within the isolation. To remove any individual tags or to change the orientation of the OEL will require a revision to the isolation procedure and a reverification that the system is in a zero energy state

4.2.4. Closing OELs that are part of an Isolation should follow the site control of hazardous energy sources policy to close the isolation and return the system to service.

4.3. Creating and closing OELs within an Isolation, that are not required for or part of an isolation

4.3.1. An OEL that is within an isolation but is not required for or part of an isolation will be tagged and tracked using an Open ended line tag and tracked in the OEL tracking form. (Attachment 2)

4.3.2. As soon as the OEL is created, an Open ended line Tag will be attached to the valve.

4.3.3. The tear off portion of the tag will be filled out and retained with the isolation documentation

4.3.4. The Tag Number, Location, Date, and Individual who hung the tag will be logged on the OEL Tracking Form which will be included in the isolation documentation.

4.3.5. Closing OELs within an Isolation, that are not required for or part of an isolation

4.3.5.1. OEL is Closed

4.3.5.2. OEL Tag is removed and reconciled with the tear off portion in the isolation documentation.

4.3.5.3. The individual who reconciled the OEL Tag will initial off on the OEL Tracking Form.

4.4. **Creating and Closing OELs outside of an Isolation (***instrument work, process clearing, logistics line-ups, special samples, or anytime an OEL is created and it is not for isolation preparation or verification of zero energy)*

4.4.1. Each area shall track Open ended line tags (Attachment 1) that are not part of an isolation on OEL Tracking Form.

4.4.2. Anytime an OEL is created and it will not be in exclusive control of the individual creating the OEL for the entire time it is open, an OEL Tag will be attached to the OEL and tracked on OEL Tracking Form.

4.4.2.1 The tear off portion of the OEL Tag will be completed and managed in Daily Log and then to Shift Supervisor

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4.4.3. Closing OELs outside of an isolation

4.3.3.1 OEL is closed, and plugged/blinded as appropriate
4.3.3.2 Tag is removed and reconciled with the tear off portion
4.3.3.3 The removal of the OEL will be tracked on OEL Tracking Form, including documentation of tag remover
4.3.3.4 OEL Tracking Forms will be maintained from close plus 30 days

4.5. **Creating and Closing OELs inside a System LO/TO During a Turnaround** (Used when making line breaks on a line that is part of a boundary LO/TO Box)

4.5.1. An OEL that is required as part of an isolation will be tagged and tracked using an energy isolation tag and tracked by being included in the isolation documentation. (BMEHS-002.005, LT&T)

4.5.2. As soon as the OEL is created, a LT&T tag will be attached to the valve. OEL's that are tracked using an LT&T tag must be treated the same as any other component within the isolation. To remove any individual tags or to change the orientation of the OEL will require a revision to the isolation procedure and a reverification that the system is in a zero-energy state.

4.5.3. Any OEL created during a maintenance activity will be verified and OEL not required for the system isolation will be managed by:

4.5.3.1. Prior to removal of system isolation these will be performed.
4.5.3.1.1. Operations will perform "Walk the Line" to verify no OEL in the system.
4.5.3.1.2. Perform "Water Run" to verify no OEL.

4.5.4. Closing OELs that are part of an Isolation should follow the site control of hazardous energy sources policy to close the isolation and return the system to service.

4.6. Exceptions

4.6.1. If all OEL's cannot be tagged (i.e. Unit wide clean out, shutdown/ turnaround) then the following conditions must be met to ensure that OEL's can be tracked and controlled in accordance with this procedure.

4.6.1.1. The controlling document is a procedure of high quality

4.6.1.2. The procedure will be printed and each step initialed by individual(s) performing the task

4.6.1.3. Each OEL will be verified by a second individual after it is closed.

4.6.1.4. The completed procedure must be reviewed by a shift supervisor and retained until the system is returned to service.

4.6.1.5. The procedure must be current and approved for use following the unit's procedure certification process.

4.6.1.6. Procedure Steps must include the following:

4.6.1.6.1. A procedure step and a space to record each OEL Tag number

4.6.1.6.2. Procedure Step when OEL is closed and tag is removed

4.6.1.6.3. Space for individual performing task to sign off on each procedure step

4.6.1.6.4. Space for a second individual, verifier, to sign off that each OEL is closed.

5. TRAINING

5.1. Site procedure will be included in MOC; Monthly Safety Meeting, and part of unit training to ensure that the purpose and function of this procedure is understood and that adequate knowledge and skills are developed and maintained for the safe application and management of OELs.

6. RESPONSIBILITIES

6.1. Site Director

The Site Manager has responsibility for ensuring the implementation of this procedure.

6.2. Safety Team Leader

The Team Leader of the Site Safety Team has the primary responsibility for issuing, reviewing, administering, and/or interpreting this procedure.

6.3. Unit Managers

- Implement the requirements of this procedure.
- Ensure that the requirements are being followed in their areas of responsibility.
- Ensure that training is provided as per requirements.
- Ensure that identified deficiencies are corrected and forwarded to site Safety for review.
- Verify that employees have training on this and other applicable BASF safety standards and have procedures to comply with them.
- Verify that employees are trained and qualified to perform the subject activities

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6.4. Employees

- Understand the intent of this procedure and take measures to ensure it is implemented
- Provide feedback to unit management on opportunities to improve procedure and reduce loss of primary containment

7. RELATED DOCUMENTS

OSHA 29 CFR 1910.147 (control of hazardous energy)
BMEHS-002.005 - Lock, Tag, and Try
BMEHS-002.020 Line Breaking
BMEHS-002.026 - Safe Work Permits

8. Attachments

Attachment 1 – Open Ended Line Tag
Attachment 2 – Example Open Ended Line Tracking Form

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