

	<b>SMITH CONSTRUCTION, INC.</b> FMC Scrubber N7 Cleanout	Doc No:	SCI-S012
		Initial Issue Date	02/13/2025
		Revision Date:	10/06/2025
<b>FMC Scrubber N7 Cleanout</b>		Revision No.	1
Preparation: Bryan Gaddy	Authority: President	Issuing Dept: Operations	Page: Page 1 of 4

## Purpose

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To ensure the safe and effective process to remove blockage and clean the FMC Scrubber Line entry at N7.

## Scope

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This policy shall cover the process for Smith Personnel conducting the FMC Scrubber Cleaning. When performing vacuum truck operations inside Valero Ardmore Refinery, activities must be performed in accordance with SHG E-31 "Vacuum Truck Operation Safety & Health Guidelines".

## Risks

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- **Exposure to Product/Vapor**
- **Slips/Trips/Falls**
- **Hose Blow Out**
- **Reversing while backing up to the super sucker**
- **Multiple Location**
- **Damage to Equipment/Property**

## PPE

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- **Basic PPE**
- **Safety Harness**
- **Face Shield**

## Equipment

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- **20K Hydroblaster**
- **Vacuum Truck**

## Key Responsibilities

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### Supervisors

- Shall ensure that the process is followed and initial after every step on the step out sheet located on page 3 of this procedure.

### Employees

- Shall follow all aspects of this procedure.

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## Procedure

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### Pre-Work & SET-UP

1. **Conduct Pre-Trip on Equipment**
2. **Complete JSA**
3. **Obtain Permit**
4. **Sign-Off Sheet.** Use Sign-Off Sheet on Page 3 of this Procedure during the process to ensure each step is completed correctly.
5. **Mark Hose Brake Placement.** Measure 10'-8" beginning at the Cleaning Head Fitting back toward the foot feed on the High-Pressure Hose and mark with RED TAPE. The demarcation should be at least 4" wide and should be thick enough to endure washout conditions.
6. **Mark Bouy Location.** Measure 14'-8" beginning at the Cleaning Head Fitting back toward the foot feed on the High-Pressure Hose and mark with YELLOW TAPE. The demarcation should be at least 4" wide and should be thick enough to endure washout conditions.
  - NOTE: This distance is the maximum entry distance and will be used to set the anchor Buoy to the hose.
7. **Attach anchor Bouy** to the hose At the YELLOW TAPE MARK. Ensure that the buoy will not move or slide with forcible pressure.



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## Cleanout

8. **Head Insertion.** Turn equipment and insert the cleaning head approximately 1' into N7 of the Scrubber.
9. **High Pressure Cleaning.** Increase pressure and adjust to 16kpsi by pressing food feed and using "thumb up and thumb down hand signals". If hand signals do not work because of distance or visibility (night, twilight operation, or other impairment) use a radio, which can be secured from Valero Maintenance Department.
10. **Horizontal Washing.** Begin washing the horizontal portion, by pushing on the high-pressure hose and allowing the cleaning head to travel into the pipe.
  - o **NOTE: IF PLUG IS REMOVED AND FLOW IS RESTORED AT ANY POINT, STOP CLEANOUT AND ADVISE VALERO MAINTENANCE. VALERO MAINTENANCE OR A VALERO REPRESENTATIVE WILL DIRECT SMITH TO CONTINUE CLEANING OR TO BEGIN SHUTTING DOWN.**
11. **Vertical Washing.** Once the horizontal portion of the pipe run, allow the hose to enter N7 until it reaches the RED DEMARCACTION on the hose, then increase pressure to 17.5kpsi and move the hose until the hose begins to move past the Red Mark on the hose. Allow the hose to travel up in the vertical run until the buoy reaches N7 Flange Face.
12. **Head Extraction.** Once the "plug" (stoppage) has been removed, turn the pressure down to 12kpsi and begin to pull the hose and cleaning fitting out of the flange. When the Cleaning Head is completely out of the Nozzle, turn the pressure to idle and begin cleanup.

## CLEAN UP AND COMPLETION

13. **Clean up.** Secure all hoses and ensure that all trash have been collected for disposal. Store the acorn in the case and Clean all equipment.
14. **Contact supervisor** for project completion approval.

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Stage	Step	Activity	Supervisor	Time Complete
Set-up	1	Measure 10'-8" beginning at the Cleaning Head Fitting back toward the foot feed on the High Pressure Hose and mark with RED TAPE. The demarkation should be atleast 4" wide and should be thick enough to endure washout conditions. This distance is the distance to the center of the Tee from the Flange Face of N7 to the center of Tee.		
Set-up	2	Measure 14'-8" beginning at the Cleaning Head Fitting back toward the foot feed on the High Pressure Hose and mark with YELLOW TAPE. The demarkation should be atleast 4" wide and should be thick enough to endure washout conditions. This distance is the maximum entry distance and will be used to set the anchor Buoy to the hose.		
Set-up	3	Attach anchor Buoy to the hose At the YELLOW TAPE MARK. Ensure that the buoy will not move or slide with forcible pressure.		
Set-up	4	Turn equipment and insert the cleaning head aproximately 1' into N7 of the Scrubber.		
Set-up	5	Increase pressure and adjust to 16kpsi by pressing foot feed and using "thumb up and thumb down hand signals". If hand signals do not work because of distance or visibility (night, twilight opertion, or other impairment) use a radio, which can be secured from Valero Maintenance Department.		
Process	6	Begin washing the horizontal portion, by pushing on the high pressure hose and allowing the cleaning head to travel into the pipe. *** NOTE IF PLUG IS REMOVED AND FLOW IS RESTORED AT ANYPOINT, STOP CLEANOUT AND ADVISE VALERO MAINTENANCE. VALERO MAINTENANCE OR A VALERO REPRESENTATIVE WILL DIRECT SMITH TO CONTINUE CLEANING OR TO BEGIN SHUTTING DOWN.		
Process	7	Once the horizontal portion of the pipe run, allow the hose enter N7 until the RED DEMARKATION on the high pressure hose, then increase pressure to 17.5kpsi and work the hose until the hose begins to move past the Red Mark on the hose. Allow the hose to travel up in the vertical run until either the plug is opened up or the buoy reaches N7 Flange Face.		
Shutdown	8	Once the "plug" (stopage) has been removed, turn the pressure down to 12kpsi and begin to pull the hose and cleaning fitting out of the flange.		
Shutdown	9	When the Cleaning Head is completely out of the Nozzle, turn the pressure to idle and begin cleanup.		