INERT VACUUM OPERATION PROCEDURE

V:1 2022

Industrial Performance Services

Industrial Tubular Catalyst Services

Inert Vacuum Operation Procedure

January 2022

INERT VACUUM OPERATION PROCEDURE

A. All components including the ducting, the cyclone and vacuum equipment must be properly bonded together and must be grounded to prevent build-up of an electrostatic charge.
B. Hoses can be eroded by catalyst and must be visually examined prior to each use. Damaged hoses shall be repaired immediately when found damaged.
C. Vacuum equipment must be purged with nitrogen prior to use and a nitrogen supply should remain connected at all times.
D. A vacuum system removes large amounts of nitrogen from the vessel. Nitrogen levels in the vessel must be regulated to maintain the proper concentration during vacuum operations. Exhaust should be discharged to a safe location. A barricade should be utilized to establish a safe zone around the vacuum truck.
E. Vacuum operations must be stopped if the vessel O^2 level rises above 4%.
F. The location of the vacuum hose could hamper emergency egress from the vessel. This needs to be considered in the emergency evacuation procedures.
G. Spent catalyst containers must be inerted (e.g. purged or use of dry ice chunks)
H. Baghouse temperature will be monitored during vacuum operations. (Follow undegenerated catalyst vacuum truck baghouse procedure)

UNREGENERATED CATALYST VACUUM TRUCK BAGHOUSE PRCEDURE

A. When it becomes necessary to remove dust from the filter baghouse on a vacuum truck the temperature of the baghouse discharge will need to be monitored with a thermometer, use of a magnetic thermometer helps to check areas. If the temperature of the discharge area is above 160° F increase N^2 purge until the temperature comes down to the 160° F limit.

At the end of the vacuuming operation, the internal components of the vacuum system should be thoroughly washed/cleaned to remove pyrophoric dust/residues. Filters should be routinely cleaned to prevent build-up of pyrophoric waste.

Competency Assessment

No.	Questionnaire	C/NYC
Q1		
A1		
Q2		
A2		
Q3		
A3		
Q4		
A4		
Q5		
A5		

Enclosed Attachments	
Risk Assessment	☑
Environmental Aspect and Impact	☑
Training and Competency	☑
Measure and Evaluation Tools	☑

Competency Checklist

To be filled out by Trainer and signed by Employee, Assessor and Supervisor before being returned to the HSEQT Manager for recording purposes.

Procedure	Competency	Date	Competent YES / NO	Employee Signature

(please tick appropriate box)

This employee is competent in performing the job. ☐

This employee has not attained the competency level. ☐ *

* *If the employee has not attained all competency levels, the General Manager must assess the action to be taken, provide an extension of training or alternative action as listed below.*

Alternate action to be taken : _____

Signed By Employee: _____ Date: _____

Trainer: _____ Date: _____

Assessor: _____ Date: _____

Regional Manager: _____ Date: _____

Environmental Aspects and Impacts

Identified Environmental Aspects and Impacts

The following table is a summary of the likely environmental aspects and impacts that may be identified during site inspections. The significance of each impact needs to be assessed using the Risk Assessment Model.

Activity	Aspect	Impact
Purchasing & Administrative Work	Consumption of goods	Conservation of natural resources
	Consumption of energy (eg. Electrical equipment and facilities)	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of waste (eg. Paper)	Consumption of space for waste disposal; Habitat loss
Climate Control	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of noise	Disturbance to community; Habitat loss
Cleaning of – offices / vehicles	Storage, use and release of chemicals	Contamination of air, water or soil; Risk to human health
Transport (Fleet vehicles / staff travel)	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Loss of habitat at all stages of generation; Light pollution
	Consumption of goods (eg. Oil)	Consumption of natural resources; Generation of waste; Habitat loss; Biodiversity impacts
	Generation of waste (eg. Oil)	Consumption of space for waste disposal; Potential contamination of water or soil; Habitat loss
	Exhaust emission	Release of greenhouse gases and atmospheric pollution
	Use of dangerous goods (eg. Batteries)	Potential contamination of air, water or soil; Risk to human health
	Generation of noise	Disturbance to community; Habitat degradation
Operations		

Risk Assessment // insert name here					
Step No: Logical sequence	**Sequence of Basic Job Steps documented in the Procedure, Work Instruction and project plans. Break down Job into steps.** Each step should be logical and accomplish a major task.	**Potential Safety & Environmental Hazards/Impacts at the site of the Job** Identify the actual and potential health and safety hazards and the environmental impacts associated with each step of the job.	**Risk Rating** Refer to the risk matrix or HSEQT.PRO. Risk Mgt	**Recommended Corrective Action or Procedure** ***Determine the corrective actions necessary to reduce the risk to as low as reasonably practical (ALARP) refer to HSEQ.PRO.Risk Mgt. The risk must be rediced or controlled to ALARP before work commences.*** Document who is responsible for implementing the controls to manage each hazard identified.	**Risk Rating** refer to the risk matrix or HSEQT.PRO.Risk Mgt
1.					
2.					
3.					
4.					
5.					

Risk Assessment Audit

Process: insert// **Procedure**: Insert //	Date:	Audited by :
	Location of Audit:	Area Mgr/Supervisor:

Item	Question	Evidence Sited	Comments	Conformance Score 0,3,5
1.				
2.				
3.				
4.				
5.				
6.				
7.				

AUDITOR'S SIGNATURE: SAFETY REP'S SIGNATURE:	CONFORMANCE SCORE: / 25 CONFORMANCE %:	0 – Non Conformance 3 – Continuous Improvement Opportunity 5 – Total Conformance