PSM COMPLIANCE

The focus used on implementing CFR 1910.119 is the protection of our employees, our equipment, our neighbors, and the environment.

Nine Safety Teams have been established from all disciplines in the refinery to assist the overall safety effort and monitor compliance and improve implementation of 1910.119. They are Total Involvement; Safety and Health Rules and Procedures; Emergency Response; New/ Altered Equipment Acceptance; Safety and Health Auditing; Safety Motivation and Accountability; Serious Incident Investigation; Contractor; and Process Hazards.

The following is a summary of how we are implementing the various portions of CFR 1910.119 at Koch Refining Company's Corpus Christi refinery, with the responsible party and Safety Team listed in parentheses.

1. **Employee Participation** - A written plan entitled "The Safety and Health Process" has been developed. Employees from different areas of the refinery, and in different levels of those areas, are involved in developing and updating information and making that information available to those who need it. The Refinery Quality System involves all disciplines in the effort to produce consistent high quality products. (The Refinery Manager, Central Safety and Health Council, Total Involvement Team, Safety Motivation and Accountability Team, Quality Coordinator)

2. **Process Safety Information** - Existing information is being verified, corrected, and collected in a central location to facilitate access to it. (Hazard Analysis Coordinator, Design Drafting Supervisor, Process Hazards Team)

3. **Process Hazards Analysis** - A team composed of Koch employees, including a trained Facilitator, Operations representative, Process Engineer, Refinery Engineer, Supervisor, and any other groups required, takes the updated PSI and analyzes the process. (Hazard Analysis Coordinator, Process Hazards Team)

4. **Operating Procedures** - Each Process Control Room has either completed, or is in the process of completing, an Operating Procedures Manual for the area. These manuals include all processes in the unit, whether or not they are covered by the regulation. (Processing Manager)

5. **Training** - Training begins at employment and continues for the duration of one's career. Results of the training classes are documented and retained. Formal and periodic training is given in Process and Procedures. Training is also given on shift. (Training Coordinator, Total Involvement Team)

6. **Contractors** - Contractors are expected to conform to API-RP 2220. The Contractor Safety Coordinator is responsible for auditing performance. (Refinery Engineering Manager, Contractor Team)

7. **Pre-Start-Up Safety Review** - A study is conducted for new units, major revamps, or new processes to make certain those who operate the equipment or perform maintenance work on the equipment are aware of the proper operating or maintenance procedures. Training is done prior to commissioning. (Process Engineering Manager, New/Altered Equipment Acceptance Team, Process Hazards Team)

8. **Mechanical Integrity** - All equipment is operated and maintained within safe limits. People who maintain equipment are trained to perform testing and inspection. Only acceptable quality replacement parts are used. Frequency of tests or inspections is determined by the manufacturer's recommendation or past history. (Maintenance Manager, New/Altered Equipment Acceptance Team)

9. **Hot Work Permit** - Our Hot Work Permit uses a checklist format to ensure that the affected area is isolated, safe and ready. It further ensures that Safety, Operations, Maintenance, and Contractors are aware of the work being done and any special circumstances regarding it. This permit has been expanded to include "Cold Work" as well. The emphasis being that all work is conducted in the safest possible manner. (Safety and Health Manager, Safety and Health Rules and Procedures Team)

10. **Management of Change** - Any change other than replacement in kind that affects the safety of the process is reviewed by three separate groups for safety, necessity, and advisability before being implemented. PSI is updated when a change is made. (Hazard Analysis Coordinator, Process Hazards Team)

11. **Incident Investigation** - All accidents, near misses, etc., are investigated within 48 hours by a safety team which has been formed for that purpose. Contributing factors are identified and communicated to all affected personnel. (Health and Safety Manager, Serious Incident Investigation Team)

12. **Emergency Planning and Response** - An Incident Command System is being implemented to respond according to any type of emergency. ERT members receive training enabling them to deal with all emergencies likely to occur. In addition, alarm systems are in place and the employees and community are educated in their use. (Emergency Response Coordinator, Emergency Response Team)

13. **Compliance Audit** - There are various internal audits conducted. Different groups routinely perform self-audits to improve performance. Others are brought in periodically for objectivity. An audit team will evaluate and certify compliance with 1910.119 annually. (Refinery Manager, Support Services Manager, Safety and Health Auditing Team)

14. **Trade Secrets** - Any information regarding health, safety, or operation of processes or equipment is made readily available to those who need it. (Refinery Manager, Total Involvement Team)

LDS/syw
1/28/93

WHY A SAFE WORK PERMIT

1. Required To Have And Document Process Over View 1910.119.
2. Need To Assure Chemical Hazards/MSDS Reviewed 1910.1200.
3. Emergency Procedures And Accountability 1910.38.
4. Reduce Number Of Individual Paper Work Documentation.
5. Easier Method Of Documenting Lockout/Tagout Procedure (OSHA Settlement).
6. Hazards Of Each Job And Process Must Be Reviewed 1910.119, 1910.1200 And OSHA Settlement.
7. Increases Safety Awareness And Compliance.
8. Improve Communication.
9. To Allow Operations To Know Every Job Being Done In Their Area.
10. To Allow Operations And Maintenance To Have A Positive Method Of Reviewing All Safety Preparations For The Work To Be Performed.

SAFE WORK PERMIT

In Case of Emergency
Notify Area Process Personnel
Safety Lead or Call
Ext. 8596 or 8797

KOCH REFINING COMPANY
Corpus Christi Refinery

Date____/____/____

Time_____ AM PM

Names of everyone who will work on this job must sign in on the pink copy of this permit. The Safety Lead is responsible for communicating all elements of the Safe Work Permit to his/her crew.

1. UNIT/Location_____ Equipment#_____

W.O./AFE#_____ Cost Center#_____

Job Description:_____

_____

This Permit is only valid for 24 hours. After 24 hours a new permit must be issued. The safe work permit pink copy shall be returned to Safety & Health.

2. Safe Work Permit Checklist:

(A) Process Overview completed	Yes____	No____	N/A____
(B) Chemical Hazards Identified and MSDS Reviewed:	Yes____	No____	N/A____
(C) Will Energy Control Program Be Required:	Yes____	No____	N/A____
• Equipment Depressured	Yes____	No____	N/A____
• Equipment Cleared	Yes____	No____	N/A____
• Energy Source Locked and/or Tagged Out	Yes____	No____	N/A____
• Energy Source Tried	Yes____	No____	N/A____
• Energy Source Blinded or Isolated	Yes____	No____	N/A____
(D) Help From Other Craft Needed (Electrician, Insulators, Scaffolders, Etc.)	Yes____	No____	N/A____
(E) Emergency Action and Equipment Identified	Yes____	No____	N/A____
(F) Is Eye Wash/Safety Shower Operable	Yes____	No____	N/A____
(G) Hot Work Permit Procedure Followed	Yes____	No____	N/A____
(H) Confined Space Permit Procedure Followed	Yes____	No____	N/A____
(I) Hot Tap Authorization Completed	Yes____	No____	N/A____
(J) Excavation Identification Form Completed	Yes____	No____	N/A____
(K) Critical Lift Authorization Completed	Yes____	No____	N/A____
(L) Safe For Motorized Equipment Entry	Yes____	No____	N/A____

If any of the above questions are answered No, the Safety Leads Supervisor must initial.

3. Check Personal Protective Equipment Needed:

____Respirator	Class of Clothing A____ B____ C____ D____		
____Breathing Air	____Ground Fault Interrupter	____Goggles/Faceshield	____Rubber Gloves
____Fall Protection	____Hot Sticks	____Hearing Protection	____Flash Coat (Blast Coat)
____Barricades	____Wooden Clothes Pins	____Insulated Blankets	

4. Any Other Special Hazards and Precautions:_____

_____

Safety Lead:_____ Safety Lead (Relief):_____

Process Personnel/Owner:_____ Process Personnel/Owner (Relief):_____

Revalidation:
Process Personnel/Owner:_____ Safety Lead:_____

K 010260

SAFE WORK MULTI-PERMIT

Issued By: _____ DOW LOUISIANA DIVISION Date: _____

Accepted By: _____ Time From _____ a.m. _____ p.m.

Responsibility Transfered To (Name): _____ To _____ a.m. _____ p.m.

Plant Supt. Signature (If Required): _____ Co-Signer Signature _____

Complete Section I on all permits. Completion of Section I ONLY indicates that work is controlled by departmental procedures. Completion of Sections II, III and/or IV require an On-Site Inspection.

SECTION I — GENERAL WORK PERMIT

1. Work Limited to the Following: (Description & Area/Equipment) _____

2. The Following Have Been Reviewed with Job Supervisor:

A. Safety Shower, Eye Wash - Location & Use	☐ Yes	☐ N.A.
B. Emergency alarms, Evacuation, Assembly Point	☐ Yes	
C. Procedure for Safe Job Completion	☐ Oral	☐ Written
D. Have tools & equip. of outside contractors been inspected	☐ Yes	☐ N.A.
E. Have all contract/Dow personnel received Safety Orientation	☐ Yes	☐ N.A.
F. Additional Permits Required (Lifting, Hot Tap, etc.)	☐ Yes	☐ N.A.
G. Scaffolding in Compliance (Ref. E-6)	☐ Yes	☐ N.A.

3. Special Exposure to Protect Against: ☐ None

Chemical (name): _____

☐ Flammable ☐ Corrosive ☐ Pressure Extreme ☐ Falls ☐ Heat Stress
☐ Toxic ☐ Reactive ☐ Thermal Burn ☐ Electrical ☐ Asbestos
☐ Skin Contact ☐ Hot Water/Steam ☐ Noise
☐ Inert Atmosphere ☐ Radiation ☐ Other _____

4. Safety Equipment: (Other than area requirements): ☐ None

☐ Slicker Suit ☐ Chemical Goggles ☐ Canister Mask ☐ Barricades
☐ Chemical Suit ☐ Face Shield ☐ Supplied Air ☐ Flash Suits
☐ Rubber Boots ☐ Hood ☐ Air Pack
☐ Gloves ☐ Safety Harness ☐ Other: _____
☐ Hearing Protection ☐ Ground Fault Circuit Interrupter

5. An On-Site Inspection Connected. . .☐ Yes ☐ N.A. Initials of Inspector _____ _____

SECTION II — OPENING LINES OR EQUIPMENT EXCAVATIONS ETC. (See S-301)

Complete this Section and Section I for Opening Lines Equipment/Excavations.

	Yes	N.A.
1. Equipment Drained/Depressured	☐	☐
2. Equipment Purged/Cleaned	☐	☐
3. Fuses Removed/Switches open	☐	☐
4. Lock Required (List on Red Tag Master)	☐	☐
5. Field Switches Tested	☐	☐
6. Red Tags Attached (Refer S-303) (Master #_____)	☐	☐
7. Line Positively Identified/Initialed (Refer S-301)	☐	☐
8. Adjacent Area Safe (If Limited, Describe Below)	☐	☐
9. Area Roped Off	☐	☐
10. Blinds/Block & Bleed in place (List blinds on Red Tag Master)	☐	☐
11. Excavation Safe to perform (Refer S-301)	☐	☐
12. Blue Flag in use on RR Tracks (Refer S-306)	☐	☐

SECTION III — HOT WORK (See S-301 & S-312)

Complete this Section and Sections I and II for Hot Work

	Yes	No
1. Safety Observer (Ref. C-1) (Name) _____	☐	☐
2. Fire Extinguisher: Type: _____ Size _____	☐	☐
3. Fire Blankets (Location) _____	☐	☐
4. Water Fog (Location) _____	☐	☐
5. Purge (Gas Used) _____	☐	☐
6. Heat Exposure to Gasket, Seals, Liners, (Describe Precautions)	☐	☐
7. Other Work in Area which should be Stopped (Describe Below)	☐	☐
8. Material Present which Emits Vapor when Heated (Describe Below)	☐	☐
9. Pipe stoppers in Use (Refer Safety Ref. # A-6)	☐	☐
10. Equipment Operating or Contains original Contents. (If Yes, Written procedures are required & Plant Supt. must Co-Sign Permit)	☐	☐
11. Adjacent Areas Safe (If Limited Describe Below).	☐	☐
12. Explosimeter, Oxygen Tests Acceptable	☐	☐
13. Ground lead attached to work	☐	☐

(Describe below specific locations where LEL, O_2 tests are to be conducted & Test Frequency)

SECTION IV — VESSEL ENTRY Excavation (4' or deeper refer to S-301) (See S-301 & S-302)

Complete this Section and Sections I and II for Vessel Entry

	Yes	N.A.
1. Radioactive Devices Shielded and Locked	☐	☐
2. Procedure and Equipment for Rescue on Job Site.	☐	☐
3. Ventilation Installed and Grounded	☐	☐
4. Safety Observer Provided (Ref. C-1) (Name) _____	☐	☐
5. Hazardous Material on Walls or Behind Liners Considered	☐	☐
6. LEL, O_2, PPM Acceptable (LEL-0%) (O_2 - 19.5% +) TLV_____, PPM_____, pH_____ (Enter Actual)	☐	☐
7. Vessels blinded (Double Blocks & Bleeds require approval)	☐	☐
8. Is Vessel entry Trainer available	☐	☐
9. Has Security been notified of Rescue Plan	☐	☐

(Describe below specific locations where LEL, O_2 and PPM tests are to be conducted & Frequency)

SPECIAL INSTRUCTIONS PRECAUTIONS LIMITATIONS

Enter Special Instructions, Precautions, Limitations for all Sections (I thru IV)

_____

_____

_____

_____

K 010262