



Standard Operating Procedures

Ken Hufford

Risk Management Professionals

949/282-0123

www.RMPCorp.com

Disclaimer Regarding this Presentation

- *Risk Management Professionals, Inc.* regards the work that it has done as being advisory in nature.
- The specific requirements for Operating Procedures may vary from facility to facility.



Key Topics

- Operating Procedure Requirements
- Annual Certification
- What to Look for During Annual Certification
- Operating Procedure Improvements
- Conclusion
- Questions



Operating Procedure Requirements

- According to 40 CFR § 68.69, 8 CCR § 5189 (f), and 19 CCR § 2760.3, Operating Procedures must cover:
 - Initial Startup
 - Normal Operations
 - Temporary Operations
 - Emergency Shutdown
 - Emergency Operations
 - Normal Shutdown
 - Startup Following a Turnaround or Emergency



Operating Procedure Requirements

- The procedures must include:
 - Steps for Each Operating Phase
 - Consequences of Deviations
 - Steps to Correct Deviations
 - Safety and Health Considerations
 - Safety Systems and Functions
- Operating procedures must be readily accessible
- **Updates precipitating from major changes and annual certification**
- Development & implementation of safe work practices



Annual Certification

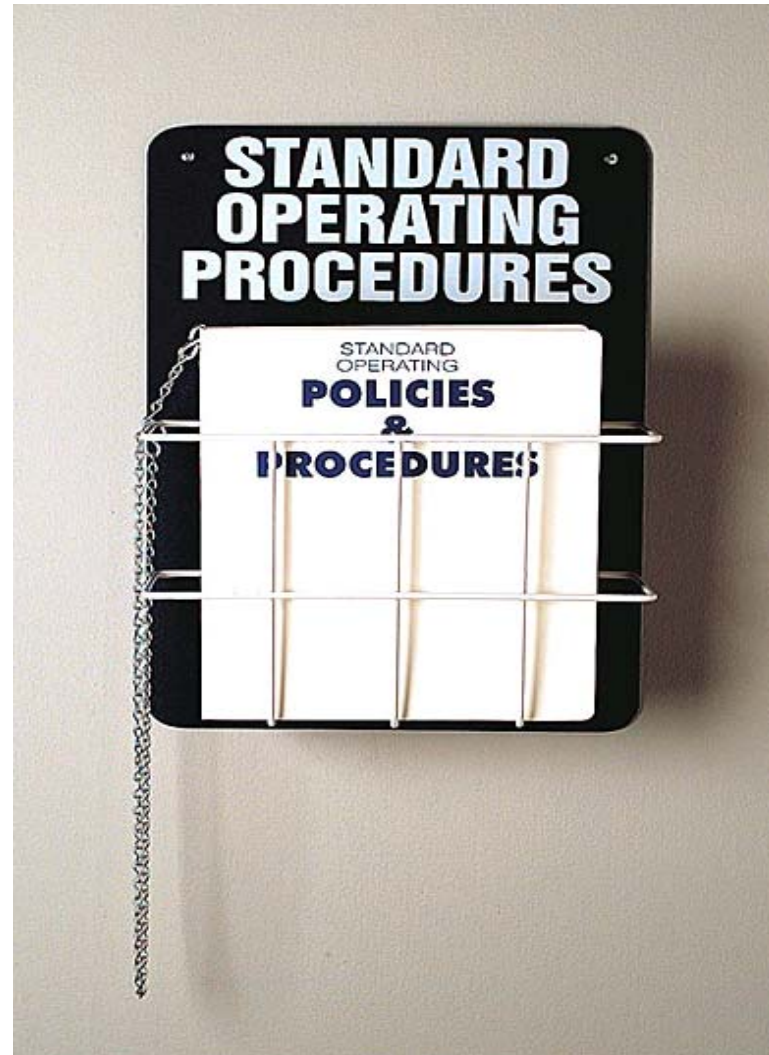
- Owner or operator shall certify annually that these operating procedures are current and accurate
 - Ensure that the procedures are read through and verified
 - Verified by operator
 - Changes in personnel
 - Keep records of the review
 - Act as a self-auditor

DATE REVIEWED	NAME	TITLE	SIGNATURE
5/5/2006	Henry Jacobs	Operator	
5/5/2007	Henry Jacobs	Operator	
5/5/2008	Henry Jacobs	Operator	
5/5/2009	Fred Williams	Operator	
5/5/2010	Fred Williams	Operator	



What to Look for During Annual Certification

- Operating procedures should be easily accessible to operators
 - Maintain a printed copy near the process area OR
 - Keep a copy on a nearby computer for reference
- If multiple copies exist, ensure all are updated if changes occur



What to Look for During Annual Certification

- Temporary Operations
 - Must be addressed in Operating Procedures
 - Operations that occur infrequently or do not fit into the other categories listed. For example:
 - Transfer/charging operations
 - Oil draining operations
 - Pump-down operations
 - Bypass operations
 - Hot gas defrost



What to Look for During Annual Certification

- Address Safety and Health Considerations
 - List appropriate PPE, especially for particularly dangerous procedures
 - Note the location of the MSDS and safety shower/eyewash stations



What to Look for During Annual Certification



- Examples of safe work practices
 - Lockout/tagout procedures
 - Confined space entry
 - Opening process equipment or piping
 - Control over entrance into a stationary source



What to Look for During Annual Certification

Consequences of Deviation Compressor High Discharge Temperature	
Condition	Reason
Compressor high discharge temperature shutdown	<ul style="list-style-type: none">• Bad discharge valves• Bad suction valves• High discharge pressure
Consequences	
<ul style="list-style-type: none">• Compressor shutdown• Loss of feed gas to Plant• Low back pressure for downstream process• Eventual process upset condition	
Correction	
<ul style="list-style-type: none">• Correct compressor knockdown condition and restart compressor• Call compressor mechanic to change bad valves• Check residue gas flow rate	

- Consequences of Deviation
 - Corrections for mis-operation
 - Reference Process Hazard Analysis or Hazard Review for additional information



Operating Procedure Improvements

- Additional Detail to Capture Best Operations Practices

INITIAL STARTUP PROCEDURES	
1	Check oil separator level.
2	Check the levels in the vessels.
3	Turn on the Evaporative Condensers.
4	Check to make sure all operational valves are open.


INITIAL STARTUP PROCEDURES	
1	Check oil separator level on MyCom Compressors.
2	Check the levels in the High Pressure Receiver (should be around 25-35%) and the Low Pressure Receiver (should be around 40-50%).
3	Turn on the Evaporative Condensers water pumps and then the Evaporative Condenser fans. Ensure the condensers are set to "auto".
4	Check to make sure all operational valves are open (suction/discharge valves on the MyCom Compressors, valves on the inlet/outlet of the High Pressure Receiver, valves on the inlet/outlet of the Evaporative Condenser).



Operating Procedure Improvements

- Incorporation of P&ID information
 - Reference specific valves/equipment
- Incorporation of photos/drawings

Emergency Shutdown Procedures	
Step	Key Points
1	<p>If there is a release/fire at the Unit, close the valve at the inlet Field Gas line and the outlet from the System.</p> <p>If there is a release/fire at a downstream unit, follow normal shutdown procedures for the Unit.</p>

A photograph showing industrial piping and a red valve handle. The piping is white and the valve handle is bright red. The scene is outdoors, likely at a refinery or chemical plant.

Questions?

Ken Hufford
Ken.Hufford@RMPCorp.com
949-282-0123 Ext. 228

