



AOCs

Learning Objectives

- Understand the definition of AOCs
- Understand how to “recognize” AOCs
- Know how to “react” to “Abnormal Operating Conditions”
- Documentation of AOCs
- Understand the difference between AOCs and Abnormal Operations



AOCs

Qualification Criteria

- Must pass a written test to verify proficiency
- Must score 100% on critical questions & 80% overall
- There is no Job Performance Evaluation (JPE) required for this covered task



AOCs

Regulation Overview:

- 49 CFR 195.503 (liquid)
- 49 CFR 192.803 (gas)



AOCs

What is an AOC?

- AOC means a condition identified by the operator that may indicate a malfunction of a component or deviation from normal operations that may:
 - 1) Indicate a condition exceeding design limits, or
 - 2) Result in a hazard(s) to persons, property, or the environment



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AOC Identification - General

- Not all AOCs look alike
- Some AOCs are general and may occur on many different covered tasks
- Some AOCs are task specific



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AOC Identification – General AOCs

- General AOCs may include blowing gas, leaking fluid, fires, inoperable valve, etc.
- AOCs requiring more knowledge of task at hand include low CP potential reading, internal/external corrosion



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AOC Identification – Task Specific AOCs

- Task specific AOCs require more knowledge of task at hand
- Task specific AOCs may include low CP potential reading, internal/external corrosion, etc.
- Details of the task specific AOCs are covered in the qualification for each individual covered task



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Emergency Valve AOC Example

General AOCs:

- Leak or fire
- Corrosion
- System is over pressured

Task Specific AOCs:

- Valve is inoperable or damaged
- Valve does not meet DOT design specifications



AOCs

- **Reaction to AOCs**
- Step 1: Scope & Assessment
 - - ID type, form, nature, quantity & hazards involved in the AOC
- Step 2: Protection of the public, emergency responders, company personnel, and the environment are 1st Priority



AOCs

- **Reaction to AOCs (cont.)**
- Step 3: Mitigation
- Develop proper course of action (evacuation, traffic control, etc.)
- Determine action needed to stop AOC (close a valve, emergency shutdown of all or part of the pipeline)
- Notify appropriate supervisor



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Documentation

- Documentation should include:
 - Date AOC discovered
 - Area covered and equipment or facility covered
 - Who discovered the AOC
 - Description of the AOC
 - Reaction to the AOC



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AOCs vs. Abnormal Operations:

- DO NOT confuse AOCs with Abnormal Operations
- Abnormal operations is an O&M procedure that is designed to provide safety when design limits have been exceeded [192.605(c), 195.402(d)]



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AOCs vs. Abnormal Operations: (cont.)

- For Abnormal Operations, your company specific pipeline O&M manual will have procedures to address response, investigation, and correcting the cause of;
 - 1) Unintended closure of valves or shutdown
 - 2) Increase or decrease in pressure or flow rate outside normal operating range



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AOCs vs. Abnormal Operations: (cont.)

- 3) Loss of communication
- 4) Operation of any safety device
- 5) Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error, which may result in a hazard to persons or property



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Summary:

- Regs: 195.503, 192.803
- Definition of AOC
- Recognize and react to AOCs
- Documentation of AOCs
- Difference between AOCs and Abnormal Operations