Alabama Public Service Commission

Pipeline Safety Seminar

December 2010

U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

Operator Qualification and Control Room Management Update

Advisory Bulletin No. ADB-09-03
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- Standardized notification for OQ plan transmittal and information required in transmittal
  - Operator information, regions involved, copy of the plan, and changes.
  - Do NOT send personnel information

- Added definitions for:
  - Observation of on the job performance
    - No tasks where adequate, sole method of evaluation
    - Does not measure ability to respond to AOCs
  - Significant
    - eliminating covered tasks, increasing interval or span of control, evaluation changes,

- Per requirements of §192.605(a) and §195.402(a), require a review of the OQ plan once per calendar year, not to exceed 15 months.
  - Periodic review of work, including AOC's

Protocol 9

- Part of every inspection
- Review of procedures and qualification requirements
- Abnormal Operating Conditions

ASME B31Q-2010 Standard

- ASME B31Q Standard issued 2010
  - Published November 2010
  - Addresses all remaining issues except noteworthy practices
  - Includes Effectiveness Measures for the operators plan
  - Includes Construction in the Scope of the Standard

- Added definition for new construction
  - All new construction, not just Alternative MAOP construction tasks

- PHMSA is reviewing the B31Q-2010 document to determine if it will consider incorporating it by reference

OQ Review

- Review of incidents, accidents, and other failures
  - Localized problem versus systematic problem

Other OQ Issues

- Breakout Tanks
  - API-653 incorporated by reference in whole adding tasks:
  - **Inspections**, **repairs**, and **alterations** to the covered task list
  - Ensure contractors qualified

Control Room Management

- 49 CFR 192.631 and 49 CFR 195.446
  - 74 FR 63310
  - Published 12/3/09
  - Effective 2/1/10
- Clock started 2/1/2010
  - Program development compliance date, 8/1/2011
  - Program implementation date, 2/1/2013

- **Amdt. 195-93 Federal Register: February 3, 2010 (Volume 75, Number 22)**
- § 192.631 [Amended]
  - 2. In paragraph (a)(2), ***"implement the procedures no later than February 1, 2013"***.
- § 195.446 [Amended]
  - 3. In paragraph (a), ***"implement the procedures no later than February 1, 2013"***.

The Rule

- This rule applies to each operator of a regulated pipeline that has a controller, in a control room, using a SCADA system.
- The procedures required to accomplish the rule requirements must be contained within the operators O&M
  - Included in 192.605 and 192.615
  - Included in 195.402

Roles and Responsibilities

Each operator must define the roles and responsibilities of a controller for:

- Normal operations
- Abnormal Operations
- Emergencies

Define

- Authority and Responsibility to take action
- Role during abnormal operations
- Role during emergencies
- Method for recording shift changes and hand over's

Adequate Information

- Provide controllers with Tools, Processes, and Procedures
  - To carry out their roles and responsibilities
  - Sections of API RP 1165 for gas pipelines
    - 1, 4, 8, 9, 11.1, and 11.3
  - All of API RP 1165 for Liquid pipelines
- Conduct point-to-point verification between SCADA displays and field
  - When equipment is added, moved, or when changes are made to field equipment that affect pipeline safety

Adequate Information

- Test and verify internal communication plan to provide manual operation
- Test ANY backup SCADA system
- Establish and Implement Procedures for when a different controller assumes responsibility, including the information to be exchanged

Fatigue Mitigation

- Each operator must implement the following methods to reduce the risk associated with controller fatigue
  - Schedules and shift lengths that allow for 8 hours of continuous sleep
  - Educate controllers and supervisors
  - Train controllers and supervisors to recognize effects of fatigue
  - Establish controller minimum HOS

Alarm Management

- Each operator must have a written alarm management plan
- The plan must include
  - Review of safety related alarms
  - Identify at least once each calendar MONTH points that have been
    - Taken off scan
    - Inhibited alarms
    - Generated false alarms
    - Forced or manual values for too long

Alarm Management

- Verify the correct Safety-Related alarm set-point values and alarm descriptions, once each calendar year not to exceed 15 months
- Review the alarm management plan to determine effectiveness, 1 each CY NTE 15 Months
- Monitor content and volume of GENERAL ACTIVITY being directed to and required of each controller
- Address deficiencies identified by implementing (e)(1) through (e)(5)

Change Management

- Operator must make sure that changes that could affect the control room operations are coordinated with the CR personnel by:
  - Establish communications between CR persons, operations management, field persons, when planning and implementing changes
  - Field persons to contact CR when emergency conditions exist and when making changes that affect CR operations

Change Management

- Seek CR or CR Management participation in planning prior to implementing significant pipeline hydraulic of configuration changes

Operating Experience

- Lessons learned must be incorporated into the CR Management procedures by:
  - Review incidents/accidents that must be reported to determine if CR actions contributed to the event and correct where necessary

- Controller Fatigue
- Field Equipment
- Operation of any relief device
- Procedures
- SCADA system configuration
- SCADA system performance

Include all lessons learned in the training program required by this section

TRAINING

- Establish a training program and review that program to identify improvements 1 CY NTE 15 months
- Program must provide training to the controller to carry out the defined roles and responsibilities from (b)
- And include the following.....

TRAINING

- Abnormal operating conditions that could occur simultaneously or in sequence
- Use of simulator or non-computerized (tabletop) method to train controllers to recognize AOC
- Train controllers to communicate within the operators emergency response procedures
- Training that will provide a working knowledge of the pipeline system
- Training for pipeline setups that are periodically but infrequently used

Compliance Validation

- Upon request, operators must submit their procedures to PHMSA or, in the case of an intrastate pipeline facility regulated by a State, to the appropriate State agency

Compliance and Deviation

- An operator must maintain for review during inspection:
  - (1) Records that demonstrate compliance with the requirements of this section; and
  - (2) Documentation to demonstrate that any deviation from the procedures required by this section was necessary for the safe operation of a pipeline facility.