Risk Based Inspections
Implementation Plan

Operator Outreach
August 19, 2014
Overview

- Senate bill 2013-02.
  - Directed to adopt a risk based approach for inspecting oil and gas locations.
  - Focus on high risk locations.
- Full implementation FY 2015-2016.
  - Resources required for this.
Findings

1. Spills and releases are most likely to occur during the production phase of oil and gas operations in Colorado.

2. Spills and releases that occur subsurface may not be identified during the normal inspection process.

3. The commission does not routinely review production facility maintenance records.
Findings

4. The Commission should monitor the installation and operation of flowlines.

5. Historic spills from oil and gas operations must be identified and remediated during facility site closure review.

6. The Commission should receive notice of construction, reclamation, drilling activities.
Findings

7. The Commission could rebalance inspection resources to provide additional inspections of fracturing operations.

8. The Commission’s Form 19 will be revised to standardize data entry and reporting requirements.
Recommendations

1. Review integrity test results and inspect production facilities more frequently.

2. Increase inspections during production facility closures.

3. Conduct more time specific inspections of construction, reclamation, and drilling activities using improved notice from operators.

4. Increase inspection frequency of hydraulic fracturing operations.
Risk Based Model Factors

- Population density.
- Environmental risks (Surface water, ground water, wildlife).
- # of reportable spills on location.
- Years in service.
- Operator performance history (AOC, C&D, OFV).
- Time since last inspection.
Recommendation #1

**Recommendation**
Review integrity test results and inspect production facilities more frequently.

**Implementation Schedule**

- **Pilot -- FY 2014-2015**
  - Develop a policy and procedures for auditing operator integrity results for flowlines and facilities.
  - Once the above is completed, select 6-12 flowlines/facilities and fully audit integrity results to tweak and finalize the procedures.
  - Inspection staff adjusts schedule as risk based model is completed.

- **Full -- FY 2015-2016**
  - Inspection staff prioritizes inspections based on risk based model results.
  - Audit (full or verification only) of operator integrity results for 500-1,000 flowlines/facilities.

**Goals**

- Audit operator integrity results.
  - Flowlines (1101.e).
  - High risk aspects of production facilities (605.d).
- Use risk based model to set direction on what production facilities to inspect.
- Coordinate between auditing operator integrity results and field inspections.

**Risk Model Factors**
1. Population Density (10%)
2. Environmental Risks (20%)
3. # of Reportable Spills (13%)
4. Years in Service (35%)
5. Operator Performance History (10%)
6. Time since last inspection (12%)
Recommendation #2

Recommendation
Increase inspections during production facility closures.

Implementation Schedule

- **Pilot -- FY 2014-2015**
  - Operators provide informal verbal notice of upcoming site closure to COGCC Environmental staff.
  - COGCC Environmental staff will inspect these locations during critical closure activities.
  - Develop procedures to inspect these locations, develop site closure templates, and determine time commitment to inspect during these activities.

- **Full – FY 2015-2016**
  - Environmental staff priorities inspections based on risk based model results.
  - Operators submit formal notices and detailed site closure plans as required.

Goals

- Develop and document more detailed analysis on the risk of a site being closed, especially in high risk areas.
  - Require detailed site closure plans for high risk areas (Risk factors #2 and #3 will determine this.)

- Increase inspections during production facility closures, which will need enhanced notices.

Risk Model Factors

1. Population Density (10%)
2. Environmental Risks (30%)
3. # of Reportable Spills (15%)
4. Years in Service (15%)
5. Operator Performance History (25%)
6. Time since last inspection (5%)
Recommendation #3

**Recommendation**
Conduct more time specific inspections of construction, reclamation, and drilling activities using improved notice from operators.

**Implementation Schedule**

- **Pilot -- FY 2014-2015**
  - No formal pilot
  - Will begin once risk based model and new notice processes are developed.

- **Full – FY 2015-2016**
  - Notices for new construction, drilling, and reclamation are received and run through the risk based model and prioritized.
  - COGCC Reclamation staff or Inspection staff will inspect during these activities for high risk locations per the risk model.

**Goals**

- Conduct more COGCC field inspections during the following activities:
  - New construction
  - Drilling (MIRU)
  - Reclamation

- Establish formalized notice processes for the above activities.

**Risk Model Factors**
1. Population Density (35%)
2. Environmental Risks (45%)
3. # of Reportable Spills (0%)
4. Years in Service (0%)
5. Operator Performance History (20%)
6. Time since last inspection (0%)
**Recommendation #4**

**Recommendation**
Increase inspection frequency of hydraulic fracturing operations.

**Implementation Schedule**

- **Pilot -- FY 2014-2015**
  - No formal pilot
  - Already began via reallocation of Inspection staff to inspect hydraulic fracturing.

- **Full -- FY 2015-2016**
  - Formalize the prioritization of inspecting hydraulic fracturing using the risk based model.

**Goals**

- COGCC staff conduct more inspections during hydraulic fracturing operations including flowback, especially in high population or environmental sensitive areas.

**Risk Model Factors**

1. Population Density (45%)
2. Environmental Risks (35%)
3. # of Reportable Spills (0%)
4. Years in Service (0%)
5. Operator Performance History (20%)
6. Time since last inspection (0%)
Our Ask to Operators

• Recommendation #1
  – Work together to finalize a policy/guidance for operator integrity testing of flowlines and key aspects of production facilities.

• Recommendation #2
  – Work to develop a site closure plan template and determine when these will be required.
  – Provide feedback on the proposed notification process when closing a production facility site.

• Recommendation #3
  – Provide feedback on the proposed notification process for construction start, starting final reclamation, and MIRU.
Approach / Timing

- Meet today to discuss
- Break into sub groups as required
  (Recommendation #1 much further along)
- Develop a work product or consensus for each of the three.
- Meet back as a larger group for additional and final comments.
- Finalize by end of October 2014.
Spills by Equipment Type

Figure 4-5: Spills by Equipment Type (Percent of Total)
Questions??
Questions??