Construction Stormwater Compliance
Oil and Gas Industry

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Introduction

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Outline

• Summary of inspection data
• Records review findings
• Compliance solutions
• Field findings
• Industry solutions
• Questions
Disclaimer

Each site is different, read the permit.
Inspection Data Summary

Statistics from IY14-IY16
In summary...

- 8 permittees inspected (11 inspections)
- 71 well pads / associated facilities
- 50/50 by location (western slope and front range)
- 50% enforcement referral rate
- 347 total findings
  - 106 records review
  - 241 field findings
The data shows....

<table>
<thead>
<tr>
<th>Number of findings per inspection</th>
<th>Total</th>
<th>Records Review</th>
<th>Field Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>31.55</td>
<td>13.25</td>
<td>30.13</td>
</tr>
<tr>
<td>Minimum</td>
<td>22</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Maximum</td>
<td>68</td>
<td>22</td>
<td>46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of findings per well pad</th>
<th>Total</th>
<th>Records Review</th>
<th>Field Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>4.89</td>
<td>1.49</td>
<td>3.89</td>
</tr>
</tbody>
</table>

*Average number of well pads observed per inspection is 8.875*
What does this mean?

• Average of 9 well pads evaluated per inspection
• Average of 5 findings per well pad
• Total of 45 findings in the inspection
• Penalties can be up to $10,000 per day per violation

$450,000
Not Top Ten

Ten common violations to avoid becoming a statistic.
**Ten Common Violations**

1. Inspection reports and corrective actions
2. Control measure specifications
3. SWMP narrative descriptions
4. Site map updates
5. Installation and maintenance of control measures
6. Material management
7. Point-in-time conditions
8. Conveyance/containment control measures
9. Sediment trapping devices
10. Implementation of control measures
Records Review Findings

And compliance solutions
1. Inspection reports and corrective actions

- Inspect as required
- Complete corrective actions
- Document compliance

1. Train project personnel
2. Document alternative methods
3. QA system
2. Control measure specifications

• Design criteria
• Specs for all controls used

1. Design controls for “possible” scenarios
2. Designate minimum requirements
3. Spec check during inspections
3. SWMP narrative descriptions

- Materials management plans
- Field wide SWMPs, site specific information

1. Include plans by reference
2. Site specific summary sheets
3. Information on site maps
4. Site map updates

- Identify material staging areas
- Indicate area of disturbance
- Identify location of control measures

1. General, logical locations
2. Use notes when possible
3. Train site personnel
Field Findings

And compliance solutions
5. Installation and maintenance of control measures

• Straw wattle
• Culvert protections
• Soil roughening

1. Alternate control measures
2. Site enhancements
6. Material management

- Drilling materials
- Trash
- Petroleum spills

1. General housekeeping procedures
2. Dumpster policies
3. Spill plans and training
7. Point-in-time conditions

- New operations
- Site maps showing controls

1. Procedures for typical activities
2. Training additional personnel
8. Conveyance/containment control measures

- Installation
- Maintenance
- Design

1. Specifications
2. Enhancements
3. Pre-planning, run-on vs run-off
9. Sediment trapping devices

- Location
- Outfall controls
- Capacity

1. Survey “low points”
2. Sizing options, using multiple
10. Implementation of control measures

- Location
- Capacity/limitations
- Intended function

1. Focus on discharge points
2. Treatment trains
3. Be creative
Takeaways

• Pre-planning, intended function
• Training and use of additional personnel
• Site specific modifications/enhancements
• Documented practices/procedures
Stormwater Associated with Construction Activities (COR0300000)
RENEWAL

www.coloradowaterpermits.com

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Questions?

Thank you for your time.