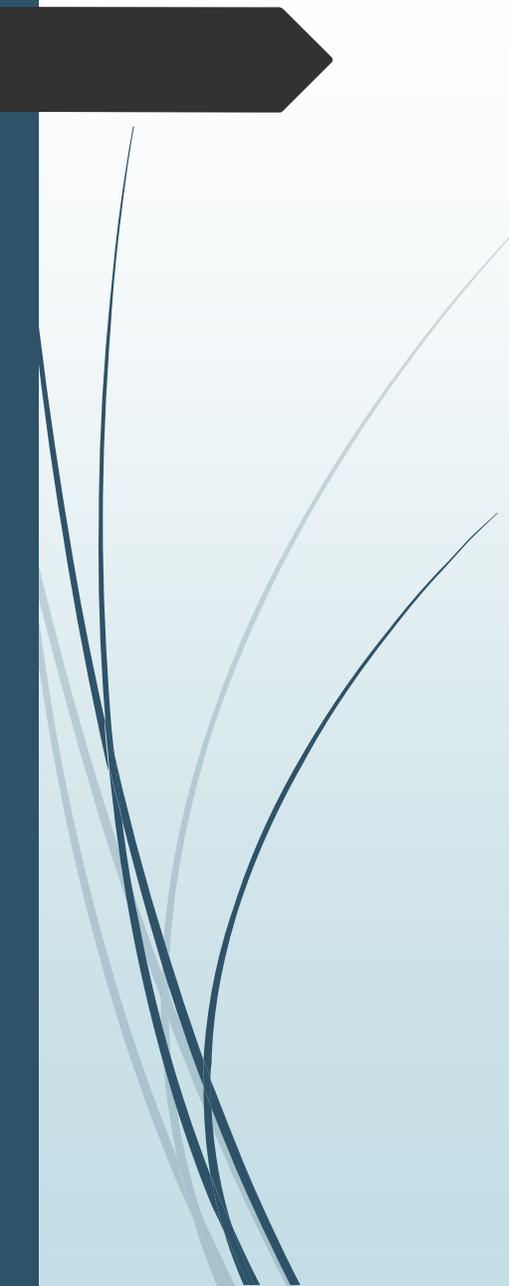




Inspection Plan Development

Joe Subsits

Presentation for the May 5, 2016 CCOPS Meeting

A decorative graphic on the left side of the slide. It features a dark blue vertical bar on the far left. A black arrow points to the right from the top of this bar. Several thin, light blue lines curve upwards and to the right from the bottom of the bar, overlapping the main content area.

Intrastate Inspection Frequencies

- ▶ Standard Inspection – 3 years
- ▶ Integrity Management Inspection – 3 years
- ▶ O&M review – 5 years
- ▶ Operator Qualification – 5 years
- ▶ Public Awareness – 5 years
- ▶ Control Room Management – 5 years
- ▶ Drug and Alcohol – 5 years
- ▶ Master Meters – 5 years

A dark blue arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

Interstate Inspection Frequencies

- ▶ Collaboration with PHMSA Western Region
- ▶ Integrated Inspection (II)
- ▶ May be customized based previous inspection findings

Inspection History

| | | | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------|------------|--------------|----------|------|------|------|------|------|------|------|------|------|------|
| Air Liquide | Kalama | Standard | | | x | | | x | | | x | | |
| | | O&M | | | x | | | | | | | x | |
| | | OQ | | | | | | | | | | x | |
| | | PA | | | | | | | | x | | | |
| Akzo Nobel | Moses Lake | O&M | | | x | | | | | | x | x | |
| | | OQ | | | | | | | | | | x | |
| | | PA | | | | | | | | | | x | |
| | | Standard | | | x | | | x | | | | x | |
| Avista | HQ | O&M | | | | | | x | | | | | |
| | | IMP | x | | | | | | | | x | | |
| | | DIMP | | | | | | x | | | | | |
| | | OQ | | | | | | | | | x | | |
| | | PA | | | | | | x | | | x | | |
| | | CRM | | | | | | | | | x | | |
| | | Transmission | Standard | | | | | | x | | | x | |
| Colville | Standard | | | x | | | x | | | x | | | |
| Pullman/Clarkston | Standard | | | x | | | x | | | x | | | |

Assignments

| Al | Scott | Patti | Lex | Dave | Dennis | Ronda | Tony |
|---------------------|--------------------------------|------------------------------|----------------------|--------------------------------|-----------------------|----------------------|---------------------|
| GTN | Tesoro | Kloser Inn Motel MM | Avista CRM | Kinder Morgan | BP Olympic | Enumclaw (DR) | Air Liquide O&M |
| GTN IMP | Transfuel Technical Assistance | Lion trucking MM | McChord CRM | Kinder Morgan O&M | Olympic Laterals | Ellensburg (SR) | Akzo Nobel O&M |
| BP Cherry Point IMP | Avista Southwest | Peninsula School district MM | CNG CRM | Northwest Natural Gorge | Chevron Ferndale & FU | Georgia Pacific (AJ) | Georgia Pacific O&M |
| Targa IMP | Avista Order FU | Tidewater PA FU | Targa CRM | Northwest Natural Transmission | PSE Lewis Thurston | Solvay (DC) | *PSE King Co East |
| B P Ferndale IMP | Avista imp | Lamb Weston PA FU | CNG Skagit/Island | Swissport | PSE Pierce | Enumclaw OQ (PJ) | *Avista Southwest |
| McChord IMP | Northwest Natural IMP | Avista PA FU | CNG Shelton/Aberdeen | NW Natural OQ | | Ellensburg OQ (PJ) | *GTN |
| Tidewater IMP | Georgia Pacific IMP | CNG PA FU | PSE LNG | McChord OQ | PSE OQ | Weyerhauser OQ (PJ) | *Kinder Morgan |
| | | Avista OQ | | | | | * CNG Skagit |
| | | CNG OQ | | | | | *Tidewater OQ |

Risk Assessment

| Total risk score | Spill/incidents | Near misses/safety related conditions | violations | HCAs/USAs | items of concern | Pipe | O&M | Integrity Mgt | Human Factors | Natural Factors | Last inspection |
|--------------------------------------|-----------------|---------------------------------------|------------|-----------|------------------|------|-----|---------------|---------------|-----------------|-----------------|
| 963 CNG-Yakima | 300 | 100 | 20 | 50 | 5 | 50 | 38 | 100 | 30 | 75 | 195 |
| 954 Olympic-North | 300 | 10 | 90 | 200 | 0 | 50 | 20 | 62 | 21 | 75 | 126 |
| 894 Tesoro Pipeline | 0 | 0 | 10 | 65 | 0 | 50 | 60 | 100 | 31 | 75 | 503 |
| 892 PSE-King Co. East | 300 | 100 | 40 | 50 | 0 | 50 | 50 | 100 | 11 | 75 | 116 |
| 869 Avista-Spokane | 300 | 0 | 0 | 50 | 5 | 50 | 51 | 100 | 30 | 75 | 208 |
| 863 PSE-Snohomish | 100 | 70 | 40 | 50 | 0 | 50 | 70 | 100 | 11 | 75 | 297 |
| 829 PSE-King Co. West | 300 | 100 | 40 | 50 | 5 | 50 | 41 | 100 | 11 | 75 | 57 |
| 796 CNG-Bellingham | 200 | 35 | 10 | 25 | 15 | 50 | 33 | 100 | 30 | 75 | 223 |
| 789 PSE-Pierce | 200 | 100 | 0 | 50 | 10 | 50 | 41 | 100 | 11 | 75 | 152 |
| 780 Olympic - Intra Laterals | 200 | 0 | 20 | 200 | 5 | 50 | 38 | 62 | 21 | 75 | 109 |
| 772 Williams Partners - Plymouth LNG | 300 | 0 | 0 | 5 | 0 | 50 | 52 | 100 | 3 | 75 | 187 |
| 761 CNG-Longview | 100 | 70 | 20 | 31 | 20 | 50 | 32 | 100 | 30 | 75 | 233 |



Risk Assessment Scoring

| <u>Index Summary</u> | <u>Max Cumulative Points</u> |
|---|------------------------------|
| Spills/Releases | 300 |
| Near Misses/Safety Related Conditions | 200 |
| Violation | 100 |
| High Consequence Areas | 400 |
| Last Inspection | 125 x (years) |
| Pipe Characteristics (design, construction) | 50 |
| Operating, Maintenance | 100 |
| Integrity Management | 150 |
| Human Factors | 100 |
| Natural Factors | 60 |

Spill Score

| Conditions | Points |
|---|--------|
| Within previous year: 1 Federally reportable incident or >10 state reportable incidents | 300 |
| 2 years or less since federally reported incident, > 5 state reported incidents within the year or less | 200 |
| 3 years since a federally reported incident, > 1 state reported incident within the past year | 100 |
| 4-5 years since Federal, 2-3 years since state reportable incident | 75 |
| 6-7 years since Federal incident, 4-5 years since state reportable incident | 50 |
| A federal or state reported incident within 10 years | 25 |
| No reported incident for >10 years | 0 |

Near Miss Score

| | |
|---|------------|
| Each reportable safety related condition, abnormal condition & overpressure event | Add 10 per |
| Immediate repair anomalies | x 50 |
| 60 day anomalies | x 25 |
| One year or 180 day anomalies | x10 |
| Monitored conditions anomalies | x 5 |

| Conditions | Points |
|-----------------------|--------|
| | 100 |
| >24 deferred leaks | 70 |
| >17-24 deferred leaks | 60 |
| >9-17 deferred leaks | 50 |
| >4-9 deferred leaks | 25 |
| 1-4 deferred leaks | 15 |
| 0 deferred leaks | 0 |



Violation Score

- ▶ Violation score = Violation + Items of Concern (Score not to exceed 100)
- ▶ 10 pts per violation, 5 pts per item of concern



High Consequence Area Score

- ▶ Maximum score High Pressure = 400 points, Maximum score Low Pressure = 100 points
- ▶ Low Pressure \leq 30% SMYS, High Pressure \geq 31% SMYS
- ▶ High Pressure Score = Miles in a high consequence area or unusually sensitive area x 5
- ▶ Low pressure Score = 1 point for every 5 Miles main in high consequence or unusually sensitive area

Last Inspection Date

| Condition | Points |
|------------------------------------|---------|
| y = years | y (125) |
| 4-<5 years since a UTC inspection | 500 |
| 3-<4 years since a UTC inspection | 375 |
| 2-< 3 years since a UTC inspection | 250 |
| 1-<2 years since a UTC inspection | 125 |
| < 1 year since a UTC inspection | 0 |



Design Construction Score

| Conditions | Cumulative Points |
|-----------------------------|-------------------|
| System Safety Factory | 30 |
| Construction Defect History | 20 |



O&M Score

| Conditions | Cumulative Points |
|-------------------|-------------------|
| Damage Prevention | 70 |
| O & M Inspection | 30 |



Integrity Management Score

| Conditions | Cumulative Points |
|--|---------------------|
| Integrity Management inspection violations | 10 points/violation |
| Integrity Management Plan | 2 points/issue |
| Maximum score | 150 |



Human Factors Score

| Conditions | Cumulative Points |
|-------------------------|-------------------|
| Operator Qualifications | 40 |
| Drug and Alcohol | 10 |
| Experience | 50 |



Natural Factors Score

| Conditions | Cumulative Points |
|------------|-------------------|
| Landslide | 40 |
| Earthquake | 20 |
| Flooding | 10 |

Probabilities

| Company | Miles | Time (yr) | Fatalities | P(fatalities) |
|---------------------------------|----------|-----------|------------|---------------|
| Avista | 6055 | 28 | 0 | 0.00E+00 |
| Cascade | 8380 | 28 | 0 | 0.00E+00 |
| Northwest Natural | 2558 | 28 | 0 | 0.00E+00 |
| Puget Sound Energy | 25089 | 28 | 1 | 1.42E-06 |
| Ellensburg, City of | 187 | 28 | 0 | 0.00E+00 |
| Enumclaw, City of | 158 | 28 | 0 | 0.00E+00 |
| Akzo Nobel | 0.5 | 21 | 0 | 0.00E+00 |
| Air Liquide | 2.43 | 19 | 0 | 0.00E+00 |
| Solvay | 1 | 10 | 0 | 0.00E+00 |
| JR Simplot | 1 | 7 | 0 | 0.00E+00 |
| Ferndale Pipeline System | 36 | 26 | 0 | 0.00E+00 |
| Georgia Pacific | 1 | 23 | 0 | 0.00E+00 |
| Inland Empire | 3 | 18 | 0 | 0.00E+00 |
| Lamb Weston | 4 | 16 | 0 | 0.00E+00 |
| Weyerhaeuser | 9 | 20 | 0 | 0.00E+00 |
| Cardinal | 3.25 | 10 | 0 | 0.00E+00 |
| Northwest Pipeline LLC | 1308 | 28 | 0 | 0.00E+00 |
| KB Pipeline | 18 | 24 | 0 | 0.00E+00 |
| Gas Transmission NW | 309 | 28 | 0 | 0.00E+00 |
| Olympic Pipe Line | 393 | 28 | 3 | 2.73E-04 |
| BP Pipelines (Cherry Point) | 10 | 28 | 0 | 0.00E+00 |
| McChord pipeline | 14.25 | 20 | 0 | 0.00E+00 |
| Tidewater | 7 | 28 | 0 | 0.00E+00 |
| Swissport | 1 | 28 | 0 | 0.00E+00 |
| AltaGas | 1 | 26 | 0 | 0.00E+00 |
| Targa | 2.7 | 3 | 0 | 0.00E+00 |
| Tesoro | 177 | 28 | 0 | 0.00E+00 |
| Phillips 66 | 134 | 28 | 0 | 0.00E+00 |
| Trans Mountain | 63.8 | 28 | 0 | 0.00E+00 |
| Williams Partners, Plymouth LNG | 1 | 28 | 0 | 0.00E+00 |
| | 44927.93 | 28 | 4 | 3.18E-06 |



Questions?