AGENDA

Day 1

8:00 – 8:30  Welcome
Class introductions

8:30 to 9:00  1 Introduction to Integrity Management
(Mark Hereth & Keith Leewis)
   Brief history of integrity management
   Terms & definitions, reference list, glossary

9:00-10:00  2. Integrity Management - Regulations and Standards
(Mark Hereth)
   Gas Integrity Regulations and Standards – International to US
   49CFR192, Subpart O and consensus standards
   Integrity management & related standards and regulations
   Description of an Integrity Management Program
   (192.911)
   Description of an Integrity Management Plan
   PHMSA Protocols
   Overview of Frequently Asked Questions
   Metrics (PHMSA Annual Report)

10:00 – 10:15  Break

10:15-11:00  3. Integrity Management Process – Threat Susceptibility and Risk Analysis
(Keith Leewis)
   Nine Major Threat Categories
   Defining Risk and Methodologies
   Understanding Potential Impact Areas
   High Consequence Areas (HCAs) (192.905)
11:00 – 12:00 4. Quantitative and Evidence Based Risk Assessment  
(Jason Skow, C-FER) invited

12:00 - 12:30 Lunch

12:30 – 1:30 5. IMP Process Risk Analysis  
(Keith Leewis)  
Expanded Risk Analysis and Outside HCAs  
Potential Rule Changes – IMP Entire Pipeline  
(Discuss high profile accidents and concerns)  
Beyond Baseline Assessment Plan (192.907, 919)  
Continuous Improvements from the Baseline Period

1:30 – 2:00 6. Class Exercise -1 Find HCAs on UR Pipeline

2:00 – 2:15 Break

2:15 – 3:30 7. IMP Process – Data Gathering & Risk Assessment  
(Mark Hereth)  
Gathering, organizing and reviewing data (192.917)  
Data sources, elements, validation alternatives  
Data integration  
GIS, as a data integration tool  
Risk assessment models, software  
Risk analysis-likelihood & consequences  
Risk Ranking options for decisions

3:30 – 4:30 8. Data Management  
(Brad Smith, GE Oil & Gas) invited  
Data Challenges in the Pipeline Space  
Key Lessons Managing Complex Data Integration Challenges  
Introduction of New Technologies to Support Challenges  
Use Case Deep Dive of Using Integrated Real Time Data

4:30 to 5:00 9. Risk Assessment - Class exercise 2 build UR Pipeline
Day 2

8:00 – 9:45  **10. Integrity Assessment Methods (192.921)**  
(Keith Leewis)  
Matching potential threats to assessment methods  
Hydrostatic testing (API 1110)  
Direct Assessment (NACE Standards) (192.925)  
   ECDA (925)  
   ICDA (927)  
   SCCDA (929)  
   Other Concerns – Casings/Guided Wave  
Confirmatory Direct Assessment (CDA) (192.931)

9:45 – 10:00  **Break**

10:00 – 12:00  **11. Integrity Assessment Methods**  
(Fraser Farmer and Mark Hereth)  
   In-Line Inspection overview  
      Metal loss detection  
      Crack detection  
      Mapping tools  
   Inspection of difficult to pig pipelines  
   Girth weld assessments  
   Long-seam assessments  
   Testing for material strength (relationship to PHMSA's IVP)

12:00 – 12:30  **Lunch**

12:30 – 2:00  **12. Possible Facility Tour**  
   Types of ILI tools  
   Field Safety and logistics  
   Data analysis

2:00 – 3:00  **13. Responses to Integrity Assessments (192.933)**  
(Keith Leewis)  
   Discovery of a condition (192.933)  
   **Prevention and Mitigation such as Corrosion Control**  
   Responses Outside of HCAs  
      Investigate and inspect  
      Fitness for Service resources  
      Remediation & repair decisions

3:00 – 3:30  **14. Class Exercise 3 – Developing an Assessment Plan for UR Pipeline**

3:30 to 3:45  **Break**
3:45 – 5:00  **15. Reassessments - Root Cause, Fitness for Service, Remediation & Repair**  
*(Mark Hereth)*  
Root Cause Analyses  
Discussion on rates of deterioration  
Reinspection intervals (192.939)  
(Results to date)

**Day 3**

7:30 – 8:45  **16. Recent IMP Issues & Practices (192.935)**  
*(Mark Hereth)*  
Interactive Threats (rev. to B31.8S)  
IMP Outside HCAs  
Cased Crossings, Station Piping, Metering  
IMCI and IVP Program  
Consequences, and Valves  
Verification of Records  
Validation of MAOP

8:45 – 10:15  **17. Putting All the IMP Pieces Together**  
*(Keith Leewis)*  
Major plan elements  
Gathering, reviewing & integrating data  
Personnel qualifications (192.915)  
Responsibilities, policies, plans, processes, procedures, specifications & standards to carry out the specifics

10:15  **Break**

10:30 -11:30  **18. Class Exercise 4**–Develop an IMP plan from inspections

11:30 -12:00  **Lunch**

12:00 – 1:30  **19. Remaining IMP Elements**  
*(Keith Leewis)*  
IMP Continual Process of Evaluation and Assessment (192.937)  
IM Program Effectiveness (192.(192.937, 945)  
Management of Change  
Communications  
Quality Control/Records (192.947)

1:30 – 2:30  **20. What to expect in the future**
(Mark Hereth)
Future Regulatory Requirements
Safety Management Systems
Meaningful Metrics
Construction Quality Management Systems
  • Relationship to other management systems
Future of IMP

3:00  21. Open discussion – Q&A

5:00  Adjourn