



# Distribution Integrity Management

Preparing for Audits



# GPS Audit Process

Gas Pipeline Safety auditors conduct a “Headquarters Audit” once every other year. These audits review company O&M Plans, Emergency Response Plans, Public Awareness Plans, OQ Plans, and Drug & Alcohol Plans.

DIMP audits will be conducted at the same time as scheduled HQ audits.

Total of 53 questions on the DIMP audit form. Some of the questions refer to monitoring and evaluating DIMP plan results, which you will not have yet. The audits for 2012-2013 will focus on system knowledge and identifying risks.



### Question No. 1 [192.1005]

Was the plan written and implemented per 192.1005 by 08/02/2011?

OR

For a gas system put into service or acquired after 08/02/2011, was a plan written and implemented prior to beginning of operation?

*The key word is "implemented". It's not enough just to have a written plan, you have to be following it.*

### Question No. 2 [Informational]

Were commercially available product(s)/templates used in the development of the operator's written integrity management plan?

*This just tells us if you are using SHRIMP or some other template.*

### Question No. 3 [Informational]

Does the operator's plan assign responsibility, including titles and positions, of those accountable for developing and implementing required actions?

*A specific person or persons has to be in charge of the program.*



## Question No. 4 [192.1007(a)(1)]

Do the written procedures identify or reference the appropriate sources used to determine the following characteristics necessary to assess the threats and risks to the integrity of the pipeline:

- Design (e.g. type of construction, inserted pipe, rehabilitated pipe method, materials, sizes, dates of installation, mains and services, etc.)?
- Operating Conditions (e.g. pressure, gas quality, etc.)?
- Operating Environmental Factors (e.g. corrosive soil conditions, frost heave, land subsidence, landslides, washouts, snow damage, external heat sources, business districts, wall-to-wall paving, population density, difficult to evacuate facilities, valve placement, etc.)?

*You must have sufficient knowledge of your system in order to assess risk. If information is missing or incomplete, you must identify additional information needed and provide a plan for gaining that information over time through normal design, construction, operations or maintenance activities conducted on the pipeline.*



### **Question No. 5 [192.1007(a)(2)]**

Do the written procedures require the consideration of information gained from past design, operations, and maintenance (e.g. O&M activities, field surveys, One-Call system information, excavation damage, etc.)?

*You have to have a process where you use the information you have available to help you with "System Knowledge". The "e.g." means the sources of information mentioned in the question are just examples, not an all-inclusive list. Consider information that is relevant to your system.*

### **Question No. 6 [Informational]**

Do the written procedures indicate if the information was obtained from electronic records, paper records, or subject matter expert knowledge (select all which apply)?

*This helps us gain an understanding of how well you know your system.*



### **Question No. 7 [192.1007(a)(3)]**

Does the plan contain written procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records?

### **Question No. 8 [192.1007(a)(3)]**

Does the plan list the additional information needed to fill gaps due to missing, inaccurate, or incomplete records?

### **Question No. 9 [192.1007(a)(3)]**

Do the written procedures specify the means to collect the additional information needed to fill gaps due to missing, inaccurate, or incomplete records (e.g., O&M activities, field surveys, One-Call System, etc.)?

*We do not have guidance on what your written procedures should or should not look like. We will be looking to see that they exist, and that they show you have put some effort into correctly identifying missing, inaccurate or incomplete records and have a realistic plan for getting additional information.*



### **Question No. 10 [192.1007(a)(5)]**

Do the written procedures require the capture and retention of data on any new pipeline installed?

### **Question No. 11 [192.1007(a)(5)]**

Does the data required for capture and retention include, at a minimum, the location where the new pipeline is installed and the material from which it is constructed?

*You must have written procedures for ensuring you are keeping adequate information on new piping and pipeline components.*

### **Question No. 12 [192.1007(a)]**

Does the documentation provided by the operator demonstrate implementation of the element "Knowledge of the System"?

### **Question No. 13 [192.1007(a)]**

Has the operator demonstrated an understanding of it's system?

*Questions 4-13 are the most important part of the audit and the questions we will be spending the most time on. If you don't have a good understanding of your pipeline system you cannot make good risk based decisions.*



### Question No. 14 [192.1007(b)]

In identifying threats, do the written procedures include consideration of the following categories of threats to each gas distribution pipeline?

- |   |  |
|---|--|
| <input type="checkbox"/> Corrosion                  | <input type="checkbox"/> Material or Welds   |
| <input type="checkbox"/> Natural Forces             | <input type="checkbox"/> Material or Welds   |
| <input type="checkbox"/> Excavation Damage          | <input type="checkbox"/> Incorrect Operation |
| <input type="checkbox"/> Other Outside Force Damage | <input type="checkbox"/> Other Concerns      |

### Question No. 15 [192.1007(b)]

Did the operator consider the information that was reasonably available to identify existing and potential threats?

### Question No. 16 [Informational]

Does the plan subdivide the primary threats into subcategories to identify existing and potential threats?

*You must consider all of the 8 defined "threats" and be able to show your thought process in determining which threats are or are not significant threats to your system.*



### Question No. 17 [192.1007(b)]

In identifying threats did the information considered include any of the following?

- |  |   |
|--|---|
| <input type="checkbox"/> Incident and leak history       | <input type="checkbox"/> Maintenance history          |
| <input type="checkbox"/> Corrosion control records       | <input type="checkbox"/> Excavation Damage experience |
| <input type="checkbox"/> Continuing surveillance records | <input type="checkbox"/> Other – Describe _____       |
| <input type="checkbox"/> Patrolling records              |   |

### Question No. 18 [Informational]

Does the plan categorize primary threats as either “system-wide” or “localized”?

### Question No. 19 [Informational]

Do the written procedures consider, in addition to the operator’s own information, data from external sources (e.g. trade associations, government agencies, or other system operators, etc.) to assist in identifying potential threats?

### Question No. 20 [192.1007(b)]

Does the documentation provided by the operator demonstrate implementation of the element “Identify Threats”?

*The items listed in Q.17 should be the minimum that you do.*



### Question No. 21 [Informational]

Was the risk evaluation developed fully or in part using a commercially available tool?  
Commercial tool name if used:

### Question No. 22 [192.1007(c)]

Do the written procedures contain the method used to determine the relative importance of each threat and estimate and rank the risks posed? Briefly describe the method.

### Question No. 23-25 [192.1007(c)]

Do the written procedures to evaluate risk consider:

- 23) Each applicable current and potential threat?
- 24) The likelihood of failure associated with each threat?
- 25) The potential consequences of such a failure?

*For questions 23-25, all of the standard 8 potential threats have to be considered:*

- Corrosion
- Natural Forces
- Excavation Damage
- Other Outside Forces
- Material or Welds
- Equipment Failure
- Incorrect Operation
- Other



### **Question 26 [192.1007(c)]**

If subdivision of system occurs, does the plan subdivide the system into regions with similar characteristics and for which similar actions are likely to be effective in reducing risk? Briefly describe the approach.

### **Question 27 [Informational]**

Is the method used to evaluate and rank risk reasonable?

### **Question 28 [192.1007(c)]**

Are the results of the risk ranking supported by the risk evaluation model/method?

### **Question 29 [192.1007(c)]**

Did the operator validate the results generated by the risk evaluation model/method? Briefly describe:

### **Question 30 [192.1007(c)]**

Does the documentation provided by the operator demonstrate implementation of the element "Evaluate and rank risk"?

*Validating the results means does your experience match up with what the risk evaluation is telling you. If your answer doesn't make sense to you maybe you did something wrong.*



### Question 31 [192.1007(d)]

Does the plan include procedures to identify when measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk?

### Question 32 [192.1007(d)]

When measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk, does the plan identify the measures selected, how they will be implemented, and the risks they are addressing?

### Question 33 [192.1007(d)]

For the top five highest ranked risks from the operator's risk ranking list the following:

- Primary threat category (corrosion, natural forces, excavation, other outside forces, material or weld, equipment failure, incorrect operation, and other concerns);
- Threat subcategory (GPTC guidelines threat subcategories are acceptable. Be specific.)
- Measure to reduce the risk (list the one measure the operator feels is most important to reducing the risk);
- Associated performance measure.

*You must actually do something with your results. It is not required for you to develop exactly five ranked risks, you should have risks appropriate to the size and complexity of your system.*



### **Question 34 [192.1007(d)]**

Does the plan include an effective leak management program (unless all leaks are repaired when found)

1. Locate the leaks in the distribution system;
2. Evaluate the actual or potential hazards associated with these leaks;
3. Act appropriately to mitigate these hazards;
4. Keep records; and
5. Self-assess to determine if additional actions are necessary to keep people and property safe.

### **Question 35 [192.1007(d)]**

Does the documentation provided by the operator demonstrate implementation of the measures, required by Part 192 Subpart P, to reduce risk?

*Question 34 should be easy to achieve as we have leak grading and leak management codified in the Ohio Administrative Code, and leak management programs should be well established. You must have documentation to show that you are following up on performing the work identified in Question 33 that will reduce risk.*



## Questions 36-39 [192.1007(e)]

For the performance measures listed below;

- 36) Does the plan contain written procedures for how the operator established a baseline for each performance measure?
- 37) Does the plan establish a baseline for each performance measure?
- 38) Does the operator have written procedures to collect the data for each performance measure?
- 39) Do the written procedures require the operator to monitor each performance measure?
  - i) Number of hazardous leaks either eliminated or repaired, categorized by cause?
  - ii) Number of excavation damages?
  - iii) Number of excavation tickets received by gas department?
  - iv) Total number of leaks either eliminated or repaired categorized by cause?
  - v) Number of hazardous leaks either eliminated or repaired, categorized by material?
  - vi) Any additional measures the operator determines are needed to evaluate the effectiveness of the IM program in controlling each identified threat?

*You have to be able to see how effective your plan is by looking at whether your “performance measures” show you are getting better, worse, or staying the same.*



### **Question 40 [192.1007(e)]**

When measures are required to reduce risk, do the written procedures provide how their effectiveness will be measured?

### **Question 41 [192.1007(e)]**

Can the performance measures identified by the operator in the plan be counted, monitored and supported?

### **Question 42 [192.1007(e)]**

Does the documentation provided by the operator demonstrate implementation of the element "Measure Performance, Monitor Results, and Evaluate Effectiveness?"

*You should have written procedures for this in place. We do not expect you to have results to monitor and evaluate yet in 2012. You should have your risks identified and measures to reduce risk in place or under development. You should also have some idea of what performance measures you will use to measure progress.*



## **Question 43 [192.1007(f)]**

Do the written procedures for periodic review include:

- a. Frequency of review based on the complexity of the system and changes in factors affecting the risk of failure, not to exceed 5 years?
- b. Verification of general information (e.g. contact information, form names, action schedules, etc.)?
- c. Incorporate new system information?
- d. Re-evaluation of threats and risk?
- e. Review the frequency of the measures to reduce risk?
- f. Review the effectiveness of the measures to reduce risk?
- g. Modify the measures to reduce risk and refine/improve as needed (i.e. add new, modify existing, or eliminate if no longer needed)?
- h. Review performance measures, their effectiveness, and if they are not appropriate, refine/improve them?



### Question 44 [Informational]

Does the plan contain a process for informing the appropriate operating personnel of an update to the plan?

### Question 45 [Informational]

Does the plan contain a process for informing the appropriate regulatory agency of a significant update to the plan?

*The PUCO does not require you to inform us when you change your plan.*

### Question 46 [192.1007(f)]

Does the documentation provided by the operator demonstrate implementation of the element “Periodic Evaluation and Improvement”?



### **Question 47 [192.1007(g)]**

Does the plan contain or reference procedures for reporting, on an annual basis, the four measures listed in 192.1007(e)(1)(i) through (e)(1)(iv) to PHMSA as part of the annual report required by § 191.11 and the State regulatory authority?

*Are you providing the information in your annual reports.*

### **Question 48 [Informational]**

When required by the State, does the plan identify the specific report form, date, and location where it is to be submitted?

*Again, the only thing you have to submit to us are your annual reports (as well as your 24-hour contact form, incident summary form, etc.)*

### **Question 49 [192.1007(g)]**

Has the operator submitted the required reports?



### **Question 50 [192.1009]**

Does the operator have written procedures to collect the information necessary to comply with the reporting requirements of 192.1009?

### **Question 51 [192.1011]**

Does the operator have written procedures specifying which records demonstrating compliance with Subpart P will be maintained for at least 10 years?

### **Question 52 [192.1011]**

Does the operator have written procedures specifying that copies of superseded integrity management plans will be maintained for at least 10 years?

### **Question 53 [192.1011]**

Has the operator maintained the records?



# How may you reduce the frequency of periodic inspections and tests?

192.1013 allows you to propose to reduce the frequency of periodic inspections and tests on the basis of engineering analysis and risk assessment results.

You must have verifiable risk assessment results, complete with a record of additional actions that have been shown to be effective in order to request a reduced frequency.

You must demonstrate that a reduced frequency, when coupled with additional actions taken as a result of your integrity management program, will provide an equal or improved overall level of safety despite the reduced frequency.

The PUCO will take and consider applications, not PHMSA.



# DIMP Audit Schedules 2012

- Arlington Natural Gas
- Columbia Gas of Ohio
- Dominion East Ohio
- Duke Energy Ohio
- Glenwood Energy
- City of Hamilton
- Northeast Ohio Natural Gas Corp.
- Southeastern Natural Gas
- Suburban Natural Gas Company
- Utility Pipeline Ltd.
- Vectren Energy Delivery of Ohio
- Village of Obetz



# DIMP Audit Schedules 2013

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- American Electric Power
  - AK Steel
  - All American Energy
  - Bright Energy
  - Consumers Gas Cooperative
  - Community Energy Resource Cooperative
  - Dayton Power & Light
  - Energy Cooperative
  - Foraker Gas Company
  - Granger Energy
  - KNG Energy
  - Lancaster Municipal Gas
  - North Coast Gas Transmission
  - Ohio Cumberland
  - Ohio Gas Company
  - Ohio Intrastate Energy
  - Ohio Valley Gas Corporation
  - Piedmont gas Company
  - Pinnacle Gas Producers
  - Ross Energy
  - Springfield Gas Company
  - Sheldon Gas Company
  - Stryker Energy
  - Swickard Gas Company
  - Waterville Gas and Oil Co.