

Distribution Integrity Management Program (DIMP)

Inspection Form

For Operators of Gas Distribution Systems

For Requirements of 192.1005 – 192.1011

Version 9/23/2011

This inspection form is for the evaluation of a gas distribution integrity management program for all operators of gas distribution except operators of master meter or small liquefied petroleum gas (LPG) systems. The form contains questions related to specific regulatory requirements and questions which are strictly for informational purposes. The questions which are related to specific regulatory requirements are preceded by the rule section number which prescribes the applicable code citation for the question. The cell preceding informational questions states “information only”.

S/Y stands for “Satisfactory” or “Yes”, U/N stands for “Unsatisfactory” or “No”, N/A stands for “Not Applicable”, and N/C stands for “Not Checked”. If an item is marked U/N, N/A, or N/C, an explanation must be included in the comments section.

Some inspection questions contain examples to further clarify the intent of the question. For example, question 5 asks, “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.)?” The list following “e.g.” is not meant to be all inclusive or that all the items are required. Some of the items may not be applicable to an individual operator’s system.

Some States require the operator to notify and send the State regulatory authority any changes to operator’s plans and procedures. Operators in these states should also notify and send revisions of the DIMP plan to the State regulatory authority.

Operator Contact and System Information — Operator Information:

Name of Operator (legal entity):	Avista Utilities
PHMSA Operator ID(s) Included in this Inspection:	31232
Type of Operator:	<input checked="" type="checkbox"/> Investor Owned <input type="checkbox"/> Municipal <input type="checkbox"/> Private <input type="checkbox"/> LPG <input type="checkbox"/> Other (e.g. cooperative)
States(s) included in this inspection:	Idaho, Oregon and Washington
Headquarters Address:	1411 E Mission, Spokane, WA 99220
Company Contact:	Linda Burger
Phone Number:	(509) 495-4423
Email:	Linda.Burger@avistacorp.com
Date(s) of Inspection:	July 10, 2012 – July 11, 2012.
Date of Report:	July 16, 2012

Persons Interviewed:

Persons Interviewed <i>(List the DIMP Administrator as the first contact)</i>	Title	Phone Number	Email
Randy Bareither	Pipeline Safety Engineer	(509) 495-8716	Randy.bareither@avistacorp.com Johns
John Schwendener	Director Gas Delivery	(509) 495-2745	John.schwendener@avista.com
David Howell	Manager Gas Compliance	(509) 495-8715	David.Howell@avistacorp.com
Kevin Farrington	Gas Integrity Management Analysis	(509) 495-8762	Kevin.Farrington@avistacorp.com
Robert Cloward	Senior GIS Analyst	(509) 495-8282	Robert.cloward@avistacorp.com
Kris Busko	Asset Management Engineer	(509) 495-8767	8767kristen.busko@avistacorp.com
Erika (Jake) Jacobs	GIS Analyst	(509) 495-8762	Erika.jacobs@avistacorp.com
Linda Burger	DIMP Specialist	(509) 495-4423	Linda.burger@avistacorp.com

State or Federal Representatives:

Inspector Name & Agency	Phone Number	Email
Ellis Hire	(208) 365 0667	ehire@puc.idaho.gov

PHMSA Form 22 - Gas Distribution System DIMP Inspection, September 23, 2011, Rev 0

Kevin Hennessey	503 378 6115	Kevin.Hennessey@state.or.us
Patti Johnson	(360) 870 4915	pjohnson@utc.wa.gov

Inspector Comments (optional):

All three state inspectors audited the company's DIMP Program Plan and each state looked at the associated documentation for their state.

Full time Linda, Kevin Farrington, and support from Jake and Rob and Kris. Available as necessary.

Avista is now tracking bedding and soil conditions. Prior to new field forms they were not.

192.1005 What must a gas distribution operator do to implement this subpart?						
Question No.	Rule §192	Description	S/Y	U/N	N/A	N / C
1	.1005	Was the plan written and implemented per the requirement of 192.1005 by <u>08/02/2011</u> ? <u>OR</u> For a gas system put into service or acquired after 08/02/2011, was a plan written and implemented prior to beginning of operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Initial plan date is 7-28-11, Avista started working on DIMP in 2008				
2	Information Only	Were commercially available product(s)/templates used in the development of the operator's written integrity management plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Fully <input type="checkbox"/>	Partially <input checked="" type="checkbox"/>	Not at all <input type="checkbox"/>		
		Commercial product(s)/templates name if used:				
Inspector's Comments		Structural Integrity made templates based on NE Gas Association and the Southern Gas Association material				
3	Information Only	Does the operator's plan assign responsibility, including titles and positions, of those accountable for developing and implementing required actions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Page 12 and 13, Table 3.1-1 List responsible positions, role/responsibility for each plan section.				
4	.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: <ul style="list-style-type: none"> • Design (e.g. type of construction, inserted pipe, rehabilitated pipe method, materials, sizes, dates of installation, mains and services, etc.)? Page 17 section 5. Appendix A and C • Operating Conditions (e.g. pressure, gas quality, etc.)? Section 5.3 • 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.)? Section 5.3 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Inspector's Comments	<p>A summary of the existing records that are utilized by Avista's IM Plan and where they are located are documented in Appendix A, Table 5.1.1. This includes, but is not limited to , incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, exposed piping reports and excavation damage.</p> <p>Section 5.5 - provisions to capture and retain data of new pipelines installed? Location and material at a minimum</p> <p>Appendix A 4 has list of information sources</p>
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192.1007(a) Knowledge of the System

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
5	.1007(a)(2)	<p>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.)? Section 5.2 and Appendix A and C</p> <p>Ensure that processes adequately address the record review. YES</p> <p>Ensure they have considered all reasonably available records, review the list. USED 5 YEARS OF RECORDS</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Avista scrubbed through 5 years of leak data re-looking at how each leak failure was categorized based on how Avista would categorize leak failures currently. The results of this data was using in Table 5.2-11, Table 5.2-13 in Appendix A, Table 6.1-1 in Appendix B and Table 9.1-1 through 9.6-1.</p>				
6	Information Only	<p>Do the written procedures indicate if the information was obtained from electronic records, paper records, or subject matter expert knowledge (select all which apply)?</p> <p style="text-align: center;">Electronic <input checked="" type="checkbox"/> Paper <input checked="" type="checkbox"/> SME <input checked="" type="checkbox"/></p>				
Inspector's Comments		<p>Page 18 Section 5.4.1 and Appendix A, page A31 ids all sub categories for leak failure and A32, lists all data bases</p>				
7	.1007(a)(3)	<p>Does the plan contain written procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records?</p> <p>Need process to identify facilities for which records are missing, inaccurate or incomplete. YES</p> <p>Is QA/QC program in place to ensure records are accurate and complete. Or have you performed an audit YES</p> <p>Ensure measures to incorporate new information is timely and effective YES</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>A summary of the existing records that are utilized by Avista's IM Plan and where they are located are documented in Appendix A, Table 5.1-1. This includes, but is not limited to, incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, exposed piping reports and excavation damage experience.</p> <p>Page 18 5.4-1 and Appendix A, page A31 ids all sub categories for leak failure and A32, lists all data bases, Used Data Collection matrix to determine what information they needed to collect</p>				
8	.1007(a)(3)	<p>Does the plan list the additional information needed to fill gaps due to missing, inaccurate, or incomplete records?</p> <p>After Ques7, they should have list of information that will need to be collected in the future. List may be in plan or referenced. Review it</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Section 5.4, Avista uses an in house Data Collection Matrix to list additional information needed to fill gaps.</p>				

9	.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.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Table 5.4-1 and Table 5.5-1, Appendix A, Avista redesigned forms and provided training to enhance documentation. Inspectors asked for documentation, Always done in Safety Meeting and O&M training, there are roasters for all training.</p> <p>1. Made new forms ie Gas Material failure report, With all required and helpful information. 2. Updated exposed pipe condition report (made 3 updates to it). And NOTE provided training whenever new forms used. Now putting manufacture and part # and SN number on all installations and maps. 3. All information is uploaded electronically to interface with GIS ERSI program: Gas Operating Order (green) and reviewed electronic screen 4. Damage Prevention 2011 CGA-DIRT data by state and map showing example of priority aldyI A</p>				
10	.1007(a)(5)	Do the written procedures require the capture and retention of data on any new pipeline installed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Section 5.5, reference to O&M section 5.11. Section 5.5 Data is continuously collected for both construction of new facilities, reconstruction of existing facilities and ongoing operations and maintenance. Information currently collected about new pipeline installation is pipe material, diameter, installation date location of facilities with dimensions, casing/conduit, and tracer wire. Additional information to be captured on as-built documents is installation method of pipe, backfill/padding, pipe specifications of newly installed pipe. For other materials installed the information to be captured is description of component, size, and manufacturer, part number if it is marked and it is identifiable. This information is to be captured on form N-2652 Construction Material List which is separate from the as-built drawing and spatially mapped in Avista's geographical information (GIS) system.</p>				
11	.1007(a)(5)	<p>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?</p> <p>Section 5.5</p> <p>Ensure procedure that retired pipe is removed from the threat assessment and risk evaluation. Yes, always has new in plan and old archived</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Every table is tied to data collected. Section 5.5 Data is continuously collected for both construction of new facilities, reconstruction of existing facilities and ongoing operations and maintenance. Information currently collected about new pipeline installation is pipe material, diameter, installation date location of facilities with dimensions, casing/conduit, and tracer wire. Additional information to be captured on as-built documents is installation method of pipe, backfill/padding, pipe specifications of newly installed pipe. For other materials installed the information to be captured is description of component, size, and manufacturer, part number if it is marked and it is identifiable. This information is to be captured on form N-2652 Construction Material List which is separate from the as-built drawing and spatially mapped in Avista's geographical information (GIS) system. Removed and abandoned pipeline data is archived for future reference.</p>				
12	.1007(a)	Does the documentation provided by the operator demonstrate implementation of the element "Knowledge of the System"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PHMSA Form 22 - Gas Distribution System DIMP Inspection, September 23, 2011, Rev 0

Inspector's Comments		Yes			
13	.1007(a)	Has the operator demonstrated an understanding of its system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Through documentation review and interviewing personnel, it appears the company has a thorough understanding of their system as they view it			

192.1007(b) Identify Threats

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
14	.1007(b)	In identifying threats, do the written procedures include consideration of the following categories of threats to each gas distribution pipeline? <ul style="list-style-type: none"> • Corrosion • Natural Forces • Excavation Damage • Other Outside Force Damage • Material or Welds • Equipment Failure • Incorrect Operation • Other Concerns 	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Inspector's Comments		Threats identified as applicable to the gas distribution pipeline are documented in Appendix B, Table 6.1-1. (Section 6, page 20)				
15	.1007(b)	Did the operator consider the information that was reasonably available to identify existing and potential threats?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 6.1, Available leak repair, incident data, material failure reports and operational and maintenance history, and excavation damage records were used to identify existing threats to Avista's distribution system. Section 6.2, Other potential threats were identified using Subject Matter Experts, example is internal corrosion biological and chemical, even though there have been no failures or incidents these internal corrosion threats could potentially be a threat to Avista's steel pipelines. Identification of future potential threats is accomplished by routinely monitoring information from sources that include: National Transportation and Safety Board (NTSB) Reports, PHMSA Advisory Bulletins, Membership in a local, regional, or national gas associations (e.g. American Gas Association, Northeast Gas Association, Southern Gas Association, etc.) and involvement in Association workshops and forums that share knowledge regarding distribution pipeline threats Appendix A, Table 6.2-1				
16	Information Only	Does the plan subdivide the primary threats into subcategories to identify existing and potential threats?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Yes Table 6.1-1, Appendix c				
17	.1007(b)	In identifying threats did the information considered include any of the following? <ul style="list-style-type: none"> • Incident and leak history <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Corrosion control records <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Continuing surveillance records <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Patrolling records <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Maintenance history <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Excavation damage experience <input checked="" type="checkbox"/> yes <input type="checkbox"/> no • Other – Describe unknown pipe _____ <input checked="" type="checkbox"/> yes <input type="checkbox"/> no 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 6.1, Available leak repair, incident data, material failure reports and operational and maintenance history, and excavation damage records were used to identify existing threats to Avista's distribution system. For unknown pipe, Avista is scrubbing old records to try and determine pipe and material or 53.07 (Table 9.5.2, 280261 feet) miles of unknown pipe in their system.				

18	Information Only	Does the plan categorize primary threats as either “system-wide” or “localized”?				
		All System-wide <input type="checkbox"/>	All Localized <input type="checkbox"/>	Some of Both <input checked="" type="checkbox"/>	Not Identified <input type="checkbox"/>	
Inspector’s Comments		Avista demonstrated their GIS ERSI program for categorizing both system wide and localized threats. Raster’s are completely overlaid on Avista’s GIS facilities. The raster then takes the mapped distribution facilities or assets within its 50-foot grid and applies the defined risk factors and weightings that apply to those facilities based on each category model.				
19	Information Only	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector’s Comments		Yes, Section 6.2, potential threats and form in back of Appendix B. In addition to the operator’s own information, Identification of potential threats is accomplished by routinely monitoring information from sources that include: National Transportation and Safety Board (NTSB) Reports, PHMSA Advisory Bulletins, Membership in a local, regional, or national gas associations (e.g. American Gas Association, Northeast Gas Association, Southern Gas Association, etc.) and involvement in Association workshops and forums that share knowledge regarding distribution pipeline threats.				
20	.1007(b)	Does the documentation provided by the operator demonstrate implementation of the element “Identify Threats”?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector’s Comments		YES, Section 6.2 and Table 6.2-1				

192.1007(c) Evaluate and Rank Risk

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C				
21	Information Only	Was the risk evaluation developed fully or in part using a commercially available tool? Fully <input type="checkbox"/> Partially <input checked="" type="checkbox"/> Not at all <input type="checkbox"/>								
Inspector’s Comments		Avista Utilities chose to utilize the ESRI® Arc GIS Model Builder environment, with the ArcGIS Spatial Analyst extension in conjunction with Avista’s geographical information system (GIS) and operational and maintenance data tables (AFM) to build their spatial risk models.								
22	.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. ESRI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector’s Comments		Section 7.3.1, The risk model is broken into a series of threat category models. Each threat category model represents a category of risk (threat) as defined in 49 CFR, §192.1015(b)(2) and if possible as identified in Section 6. Within each threat category model, the risks associated with that category are defined. For each defined risk, the data is processed, assigned a risk ranking score, and converted into a raster dataset with a 50-foot grid that gets overlaid on Avista’s facilities in GIS.								
		For questions 23 – 25, do the written procedures to evaluate and rank risk consider:	Corrosion	Natural Forces	Excavation Damage	Other outside Force Damage	Material or Welds	Equipment Failure	Incorrect Operation	Other Concerns
23	.1007 (c)	Each applicable current and potential threat?	s	s	s	s	s	s	s	s

24		The likelihood of failure associated with each threat?	S	S	S	S	S	S	S	S
25		The potential consequence of such a failure?	S	S	S	S	S	S	S	S
		Mark each box above with one of the following: S for "Satisfactory", U for "Unsatisfactory", N/A for "Not Applicable" and N/C for "Not Checked".								
Inspector's Comments		<p>Section 7, page 23. [Risk_Unknown_Pipe] + [Risk_OutsideForces]+ [Risk_IncorrectOps]+ [Risk_Material]+ [Risk_NaturalForces]+ [Risk_Corrosion]+ [Risk_Equipment]+ [Risk_Excavation]+ [Risk_JointWeld]</p> <p>The final risk total score represents an SME weighted probability which is the total aggregated risk to the gas system based on the risk factors and applied weightings, see section 7.3.2 for additional information on the factors and weightings.</p> <p>It then multiplies the Risk_Total (<i>which represents the SME weighted probability</i>) by the consequences for that raster as follows:</p> <p>Calculate Field Total_Score: [Consequence] * [Risk_Total]</p> <p>To determine the impact a gas system failure can have on the adjacent community, the factors for the consequence model include population density, pipeline operating pressure, location within a business district and migration of gas.</p> <p>The output is a risk score for each threat category; the total risk score which is an aggregate of all the threat category scores and the consequence scores; and the ratio/percentage of risk attributable to each threat category by a 50 foot geographical location</p>								
26	.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. Use GIS and raskers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector's Comments		Yes, ESRI GIS model uses raskers that cover Avista's complete System in 50x50 foot increments. Raster's are completely overlaid on Avista's GIS facilities. The raster then takes the mapped distribution facilities or assets within its 50-foot grid and applies the defined risk factors and weightings that apply to those facilities based on each category model.								
27	Information Only	Is the method used to evaluate and rank risks reasonable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector's Comments		Yes, very complete as viewed by the operator.								
28	.1007(c)	Are the results of the risk ranking supported by the risk evaluation model/method?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector's Comments		Yes, Appendix C Table 7.3-1 Risk Factors and Weightings is and in-depth modeling of their risk evaluation model for system threats.								
29	.1007(c)	Did the operator validate the results generated by the risk evaluation model/method? Briefly describe.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector's Comments		Validation for results was performed by SME's. Avista also took information to district offices and crews for additional input. However, Field district personnel are validation groups, and only provide input to SME's.								
30	.1007(c)	Does the documentation provided by the operator demonstrate implementation of the element "Evaluate and Rank Risk"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspector's Comments		Yes,								

192.1007 (d) Identify and implement measures to address risks

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
31	.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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Table 8.2.1, Appendix E, Identifies measures to reduce risk beyond part 192 requirements. Eight separate measures have been identified with procedures to reduce risk.				
32	.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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 8.2.1 and appendix E, Identifies the threat category, additional actions required, measures to reduce risk, performance measure, implementation timeframe, and current year's performance based on a 5 YR average frequency of failure.				
33	.1007 (d)	Complete the table at the end of this form: <i>Threat Addressed, Measure to Reduce Risk, and Performance Measure</i>				
Inspector's Comments		Filled out Table 1: Threat Addressed, Measure to Reduce Risk and Performance Measure				
34	.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; <input checked="" type="checkbox"/> 2. Evaluate the actual or potential hazards associated with these leaks; <input checked="" type="checkbox"/> 3. Act appropriately to mitigate these hazards; <input checked="" type="checkbox"/> 4. Keep records; and <input checked="" type="checkbox"/> 5. Self-assess to determine if additional actions are necessary to keep people and property safe. <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 8, Appendix D and Appendix E, Procedures are maintained in the companies' Operations and Maintenance manuals.				
35	.1007(d)	Does the documentation provided by the operator demonstrate implementation of the measures, required by Part 192 Subpart P, to reduce risk?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Yes, Linda has requested a Damage Prevention coordinator, currently each districts handles, hard to get stats for evaluation				

192.1007(e) Measure performance, monitor results, and evaluate effectiveness

Question No.	Rule §192	Description					S/Y	U/N	N/A	N/C
	.1007(e)	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?			
36	Does the plan contain written procedures for how the operator established a baseline for each performance measure? PG 41 AND PG 43 10.2.1	YES	YES	YES	YES	YES	YES			
37	Does the plan establish a baseline for each performance measure? Appendix F Table 9.1.1. excavation 9.4-1, 9.3.1 is for total # of leaks eliminated, 9.2-1 is hazardous leaks by material, 9.5.1 is other additional - Corporate damage prevention program will have manager and # of inspectors	YES	YES	YES	YES	YES	YES			
38	Does the operator have written procedures to collect the data for each performance measure? Page 42 Section 9.6 Data Collection	YES	YES	YES	YES	YES	YES			
39	Do the written procedures require the operator to monitor each performance measure? Note: NW, CNG (EISR tool used) ALL HAVE GIS, PSE NO GIS MAP Appendix 9	YES	YES	YES	YES	YES	YES			

Mark each box above with one of the following: S for "Satisfactory", U for "Unsatisfactory", N/A for "Not Applicable" and N/C for "Not Checked".

PHMSA Form 22 - Gas Distribution System DIMP Inspection, September 23, 2011, Rev 0

Inspector's Comments		Section 9 and appendix F of Avista's DIMP plan contains written procedures for establishing a baseline for each performance measure, collecting data, and monitoring the performance of each baseline.				
40	.1007 (e)	When measures are required to reduce risk, do the written procedures provide how their effectiveness will be measured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 10.2, Effectiveness Review, Avista's effectiveness review is maintained in their plan and uses several areas as follows: 10.2 Effectiveness Review, An assessment of the performance measures described in Sections 9.1 through 9.6 shall be performed. In cases where the re-evaluation criteria specified is met or exceeded, a re-evaluation of the associated threats and risks shall be completed. If it is determined that the current Additional/Accelerated Action is not stabilizing or reducing the threat, then another Additional/Accelerated Action maybe required; however, it may take a couple of years' worth of monitoring to truly determine if the Additional/Accelerated action is effective. This should be noted on the re-evaluation form titled Performance Measures that Exceeded Baseline, shown in Appendix G. This determination shall be accomplished using the process flow as outlined in 10.2.1 Re-Evaluation Criteria of Performance Measures.				
41	Information Only	Can the performance measures identified by the operator in the plan be counted, monitored, and supported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Yes, created performance by assets. Tables 9.1-1 contains hazardous leaks by category cause, Breakout of leaks, 5 Year average of leaks, 5 yr. baseline, 5 yr. average by facility/mile (or # of facility), Re-evaluation required and performance measure. Table 9.2-1 contains the same information concerning hazardous leaks eliminated/repaired categorized by material. Table 9.3-1 contains the performance measures system wide by primary threats.				
42	.1007(e)	Does the documentation provided by the operator demonstrate implementation of the element "Measure Performance, Monitor Results, and Evaluate Effectiveness"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Yes, summary question of 36-41.				

192.1007(f) Periodic Evaluation and Improvement

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
43	.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.)? form scatter in section 10, 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments	<p>All items Section 10 and appendix G Avista Review of performance measures: 10.2.3 Review of Performance Measures All performance measurements shall be reviewed periodically but not to exceed a maximum of 5 years to determine that it is effective and that the right measurement is being used. If it is determined that the measurement is not effective, a new one shall be developed and applied to the threat that it is measuring and a new baseline shall be established. The re-evaluation of threats and risks shall be documented in the form titled Performance Measures that Exceeded Baseline, Table 10.2-1 in Appendix G. The results of the re-evaluation shall be documented in Appendices B and C. The review shall also establish whether a complete program re-evaluation shall be completed in a shorter timeframe than five years; this decision shall also be documented.</p>					
44	Information Only	Does the plan contain a process for informing the appropriate operating personnel of an update to the plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments	<p>In Plan Forward, last 2 sentences, same as all manuals, plan is the thru intranet and sent out annually. This annual duty is listed page 43 section 10. 1. The process of how is will be added under 10.1 will make it more clear in addition to Forward information. A memo is sent for every change/update made to plan</p> <p>Section 10.1 contains procedures for updating the DIMP plan. Updates to the plan are communicated to company personnel through change sheets sent out to the district managers and placed on the companies' intranet.</p>					
45	Information Only	Does the plan contain a process for informing the appropriate regulatory agency of a significant update to the plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments	<p>Appendix c. There is a revision control for each model. And Performance Measures Appendix F.</p>					
46	.1007(f)	Does the documentation provided by the operator demonstrate implementation of the element "Periodic Evaluation and Improvement"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector Comments	<p>Yes, Appendix G, Table 10. 1-1</p>					

192.1007(g) Report results

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
47	.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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 11.1 is the guidance for report distribution. The annual report which includes the five measures shall also be sent to each respective State Pipeline Safety Authority in the State (Washington, Idaho and Oregon) where the gas distribution pipeline is located. A copy of the reports shall be maintained in the Distribution Integrity Management Program files per the requirements of Section 12				
48	Information Only	When required by the State, does the plan identify the specific report form, date, and location where it is to be submitted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Annual reporting requirements are also outlined in Avista's Gas Standards Manual, Specification 4.14 for information on additional state reporting requirements.				
49	.1007(g)	Has the operator submitted the required reports?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Yes				

192.1009 What must an operator report when mechanical fittings fail?

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
50	.1009	Does the operator have written procedures to collect the information necessary to comply with the reporting requirements of 192.1009?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 11.2, report at the end of the year. Section 11.2, Operators are required to begin collecting mechanical fitting failure information for each mechanical failure that results in a hazardous leak during the calendar year beginning January 1, 2011. Each failure shall be submitted on form F7100.1-2 Mechanical Fitting Failures. This form(s) shall be submitted to PHMSA annually by no later than March 15 for the previous year's data. (Operators are permitted to submit mechanical fitting failure report forms throughout the year.)				

192.1011 What records must an operator keep?

Question No.	Rule §192	Description	S/Y	U/N	N/A	N/C
51	.1011	Does the operator have written procedures specifying which records demonstrating compliance with Subpart P will be maintained for at least 10 years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 12, Documentation demonstrating compliance with the requirements of 49 CFR, Part 192, Subpart P shall be retained for at least 10 years.				

52	.1011	Does the operator have written procedures specifying that copies of superseded integrity management plans will be maintained for at least 10 years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		Section 12				
53	.1011	Has the operator maintained the required records?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspector's Comments		<p>Yes, Reviewed</p> <ol style="list-style-type: none"> 1. Book titled Avista's Asset Management Protocol for Managing Select Aldyl A Pipe 1. Material Failure Spreadsheet, 2. material Failure Manufacture report (explanations), 3. Natural Forces, 4. Stevenson Slide Area, 5. Snow Areas, 6. Gopher research, 7. Book Avista's Assets Management Protocol for Managing select Aldyl A Pipe, 8. Avista Utilities Asset Management 2-23-12, 9. Proposed Protocol for Managing Select Aldyl A Pipe in Avista Utilities Natural Gas System Attachment 2, 10. DuPont Letter 1986 Attachment; 11. 3 NTSB Special Investigation Report Brittle Like Cracking in PE Pipe for Gas Service; attachment Special Investigation Report for Brittle Like Cracking in Plastic Pipe for Gas service, 12. Program Change documents 13. Annual Reports, 14. Incident Reports 15. Damage Prevention, 16. Pressure Zones 17. Exposed Pipe Report 18. Patrolling Forms 19. Valve Maintenance Inspection 20. regulator Maintenance/Appendix A 21. Corrosion 22. Bridge Crossings (Patrol) documents 				

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Table 1: Threat Addressed, Measure to Reduce Risk, and Performance Measure

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

- Primary threat category (corrosion, natural forces, excavation damage, other outside force damage, material or weld, equipment failure, incorrect operation, and other concerns);
- Threat subcategory (GPTC threat subcategories are acceptable. Try to be specific. Example, failing bonnet bolts of gate valve, manufacturer name, model #);
- Measure to reduce the risk (list the one measure the operator feels is most important to reducing the risk);
- Associated performance measure.

	Primary Threat Category NOTE: Columns to Measure to Reduce Risk and Performance Measures only for Primary Threat	Threat Subcategory, as appropriate NOTE: Columns to Measure to Reduce Risk and Performance Measures for Subcategories is not listed in this form.	Measure to Reduce Risk	Performance Measure
1	Excavation	Excavation Damage	1. Repeat offender, tracking and training 2. Create a corporate Damage prevention program NOTE: In 2012 an assigned committee will begin creating the framework for a Corporate prevention Program.	1. Damages per 1000 locates

2	Material	Material Failure Pipe	<p>Annual Leak Survey/Replacement Program</p> <p>NOTE: 2011 began annual leak survey and replacement program.*</p> <p>NOTE: 2011 began leak surveying main and service tees off the main. Also began a replacement Program*</p> <p>*In 2011, Avista began leak surveying Aldyl A main that is susceptible to slow crack growth and LDIW. Avista's hired a project manager to manage the replacement project. Avista's first project was the replacement of the main and service tees in Avista's Odessa WA system. The DIMP project team has provided the project manager with 17 initial strategic prioritized project areas across Avista'</p>	Leaks per mile of susceptible pipe
3	<p>Welds and Joints</p> <p>Note: 3rd Primary threat and 3rd subcategory threat are different.</p>	<p>Unknown Pipe</p> <p>Measure to reduce threat for Unknown Pipe: is to Research to determine unknown material of pipe segments. There are approximately 35 miles in WA</p> <p>Performance Measure for Unknown pipe: Percentage left of original identified segments</p>	Continue trending	Leaks per mile of pipeline
4	Corrosion	<p>1. Corrosion external</p> <p>2. Corrosion Isolated Riser</p> <p>3. Corrosion-atmospheric</p>	<p>1. Corrosion external continue monitoring</p> <p>2. Corrosion Isolated Riser is Leaks per # of services</p> <p>3. Trend Failures</p>	<p>1. Corrosion external is leaks per mile of pipeline</p> <p>2. Corrosion Isolated riser is leaks per # of services</p> <p>3. Corrosion atmospheric is Leaks per # of meters</p>

PHMSA Form 22 - Gas Distribution System DIMP Inspection, September 23, 2011, Rev 0

5	Unknown Note: 5 th primary threat and 5 th subcategory threat are different	Incorrect Operation-Improper installation Note: Measure to reduce threat for Incorrect Operation is internal crew/serviceman inspections Note: Performance Measure is Leaks per mile of pipeline	Research to determine unknown material of pipe segments	Percentage left of original identified segments
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Other Inspector Comments	Note: In Washington the Primary Threat and the subcategory treat are not the same. There are notes in Threats 3 and 5 identifying them inside the above chart.
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