

- **182.0032 Blowdown Time, Sizing, and Volume Calculations –**
 - Dare of First Issuance – 01/05/1994

Metadata		Publishing History	Referenced Documents	
Revision Date	Submission Details	Author's Brief	Publish Memo	Justification
08/12/2023	Editorial Change	<p>5 Year Review. Added section 1.4 to include criteria and add the requirement to complete Form 7011 "Blowdown Emission Reduction Plan" where volume loss is to be estimated prior to a blowdown. Section 1.5 was added and is a continuation of section 1.4, its to inform of what is to be determined and documented in Form 7011. Section 1.6 was added to inform about Form 3466 "Reporting of Gas Blown to Atmosphere" which is to be completed upon completion of a blowdown. Section 3.2 was added to add the definition of "Blowdown Reduction", and it includes examples to reference. Reformatted and moved sections 4, 5, 6, 7, 8, 9, and 10 into subsections within newly created section 4 "Procedure". Revised and made changes to section 4 including parameter additions in 4.1 and adding correction factors to the formulas in sections 4.3 and 4.5. Section 4.6.1 formulas were updated to provide estimated amount of volume of gas vented to the atmosphere. Section 4.6.2 was revised to reference both form 3466 and 7011. Section 4.6.3 verbiage was revised to include form 3466 and Form 7011 instructions on when to complete them. Section 4.6.4 was added to include the calculations used to determine the volume of gas saved due to a blowdown reduction method or approach. In addition, the need to report volume as required in Form 7011 and 3466. In Section 4.7 a Gas Volume Calculator for Blowdowns was added. Section 6 was revised to add Form 7011. Section 7 was created to add appendices section. Table A in Appendices D was revised to update values and to provide guidance for specific gravities not available. Editorial and format changes were made throughout the document. The latest Gas Standard Template was used.</p>	Migration	Editorial Revision. To fix broken "Note" between section 4.2.1.1 and 4.2.1.2. Fix the Gas Volume Blowdown Calculator that is not able to open.
04/05/2023	Legacy Pre-Modernization	<p>5 Year Review. Added section 1.4 to include criteria and add the requirement to complete Form 7011 "Blowdown Emission Reduction Plan" where volume loss is to be estimated prior to a blowdown. Section 1.5 was added and is a continuation of section 1.4, its to inform of what is to be determined and documented in Form 7011. Section 1.6 was added to inform about Form 3466 "Reporting of Gas Blown to Atmosphere" which is to be completed upon completion of a blowdown. Section 3.2 was added to add the definition of "Blowdown Reduction", and it includes examples to reference. Reformatted and moved sections 4, 5, 6, 7, 8, 9, and 10 into subsections within newly created section 4 "Procedure". Revised and made changes to section 4 including parameter additions in 4.1 and adding correction factors to the formulas in sections 4.3 and 4.5. Section 4.6.1 formulas were updated to provide estimated amount of volume of gas vented to the atmosphere. Section 4.6.2 was revised to reference both form 3466 and 7011. Section 4.6.3 verbiage was revised to include form 3466 and Form 7011 instructions on when to complete them. Section 4.6.4 was added to include the calculations used to determine the volume of gas saved due to a blowdown reduction method or approach. In addition, the need to report volume as required in Form 7011 and 3466. In Section 4.7 a Gas Volume Calculator for Blowdowns was added. Section 6 was revised to add Form 7011. Section 7 was created to add appendices section. Table A in Appendices D was revised to update values and to provide guidance for specific gravities not available. Editorial and format changes were made throughout the document. The latest Gas Standard Template was used.</p>		Editorial Revision. To fix broken "Note" between section 4.2.1.1 and 4.2.1.2. Fix the Gas Volume Blowdown Calculator that is not able to open.

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02/07/2022	Legacy Pre-Modernization	<p>Fully Reviewed. Removed Blowdown.exe procedure (previously Section 4) due to application no longer functioning on 64-bit OS. Removed reference to Gas Standard 122.0145, Accounting Requirements for Gas Used or Lost Due to Company Operations or Damage to Company Property, due to it being merged with Gas Standard 182.0155, Gas Lost Estimation - Pipeline. Editorial changes made to improve clarity and conciseness of standard.</p>	Transfer documents to Christopher Rodriguez-Paz per Asad Akmal
06/01/2018	Legacy Pre-Modernization	<p>Fully Reviewed. Removed Blowdown.exe procedure (previously Section 4) due to application no longer functioning on 64-bit OS. Removed reference to Gas Standard 122.0145, Accounting Requirements for Gas Used or Lost Due to Company Operations or Damage to Company Property, due to it being merged with Gas Standard 182.0155, Gas Lost Estimation - Pipeline. Editorial changes made to improve clarity and conciseness of standard.</p>	Reinstate the Common Document Number

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04/24/2018	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	To add to Storage Emergency Gas Standards folder (Section 12 of Storage OEM)
04/03/2018	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	Transfer Documents to Daniel Franco
12/05/2017	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	Department Name Change from "Pipeline Design" to "Pipeline Engineering". Added section for exception procedure, to include standard exception language for all company standards.
07/08/2014	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	To change Doc Type from GAS & Org from ED.
07/12/2013	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	PUB = 2013-6-27 UPDATED 7/12/13; Restore Brief overwritten while adding to STOR binder
07/11/2013	Legacy Pre-Modernization	05/28/2008 - Calculated volume loss corrected from 10MMCF to 10 MCF in section 1.4 and 10.3 Note. 5/22/2008 - Major change in section 9 calculation and minor grammatical adjustments made.	PUB = 2013-06-27 Add to STOR-Design Info tab
06/28/2013	Legacy Pre-Modernization	Change in calculation of blown down gas equation, specifically compressibility factors are now computed using Table A instead of the imbedded equation. Inclusion of an additional Appendix (C) to also accommodate for higher pressure systems.	Document changes were included to accommodate blowdowns at higher pressure systems.
12/21/2012	Legacy Pre-Modernization		Converted from DOC to DOCK
04/06/2012	Legacy Pre-Modernization		SHRD document published as two GAS/NO CHANGES MADE TO TEXT OR HEADER & CONVERTED DOC restored!