

Category	Analysis Date	SS or USM	Model Year	Key Model Settings			Key Findings
				Set Pressures (psi)	Reinforcement Pieces	Other Assumptions	
UPGRADE YEAR	Nov-12	SS	2015	Vic Sq @ 450 NPS26 @ 400	None		B1, B2 & A required in 2015 (PEC @ 223.5 psi)
	Nov-12	USM	2021	Vic Sq @ 450 NPS26 @ 400	None		B1 required in 2021 (PEC @ 224.0 psi)
	Nov-12	SS & USM	2025	Vic Sq @ 375 NPS26 @ 275	A, B1 & B2		PEC @ 300 psi (SS) & 309 psi (USM)
	Nov-12	SS	2015	Vic Sq @ 375 NPS26 @ 400	None		Model infeasible
	Nov-12	USM	2015	Vic Sq @ 375 NPS26 @ 400	None		PEC @ 175 psi
	Nov-12	SS	2012	Vic Sq @ 450 NPS26 @ 375	None		B1&B2 required in 2012 (PEC @ 224.7 psi)
	Nov-12	SS	2013	Vic Sq @ 375 NPS26 @ 275	B1&B2		A required in 2013 (PEC @ 223.2 psi)
	Nov-12	USM	2024	Vic Sq @ 450 NPS26 @ 375	None		B1 required in 2024 (PEC @ 223.6 psi)
	Nov-12	SS & USM	2025	Vic Sq @ 375 NPS26 @ 275	A, B1 & B2		PEC @ 300 psi (SS) & 309 psi (USM)
	Oct-12	SS	2021	Vic Sq @ 480 NPS26 @ 400	None	No "DSM"	B1 & B2 required in 2021 (PEC @ 225.9 psi)
	Oct-12	SS	2025	Vic Sq @ 480 NPS26 @ 400	None	"DSM" = 0.7	B1 & B2 required in 2025 (PEC @ 220.7 psi)
DEGREE DAY FAILURE	Nov-12	SS	2015	Vic Sq @ 375 NPS26 @ 400	None		Stn B drops to 219.1 psi in at 34 DD. At 33 DD, Stn B is at 231.1 psi.
MOP REDUCTION	Dec-12	SS	2012	DVP @ 375 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	PEC Lost
	Dec-12	SS	2012	DVP @ 450 psi NPS26 @ 275 psi Parkway North @ 485 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	PEC Lost
	Dec-12	SS	2012	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 390 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	PEC Lost
	Dec-12	SS	2012	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 280 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses (Martin Grove and West Mall < 175 psi or low inlet pressure)
	Dec-12	SS	2025	DVP @ 375 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 350 psi	A, B1 & B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	SS	2025	DVP @ 450 psi NPS26 @ 275 psi Parkway North @ 485 psi MSL @ 350 psi	A, B1 & B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	SS	2025	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 390 psi MSL @ 350 psi	A, B1 & B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	SS	2025	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 280 psi	A, B1 & B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses (Martin Grove and West Mall < 175 psi or low inlet pressure)
	Dec-12	USM	2012	DVP @ 375 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	PEC Lost
	Dec-12	USM	2012	DVP @ 450 psi NPS26 @ 275 psi Parkway North @ 485 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	USM	2012	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 390 psi MSL @ 350 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	PEC Lost
	Dec-12	USM	2012	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 280 psi	None	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses (Martin Grove and West Mall < 175 psi or low inlet pressure)

	Dec-12	USM	2025	DVP @ 375 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 350 psi	A, B1& B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses (Parkway West Flow > 800 TJ/day)
	Dec-12	USM	2025	DVP @ 450 psi NPS26 @ 275 psi Parkway North @ 485 psi MSL @ 350 psi	A, B1& B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	USM	2025	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 390 psi MSL @ 350 psi	A, B1& B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
	Dec-12	USM	2025	DVP @ 450 psi NPS26 @ 375 psi Parkway North @ 485 psi MSL @ 280 psi	A, B1& B2, C	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Parkway West @ 800 TJ/day	0 Losses
PISA	Nov-12	USM	2015 & 2025	Vic Sq @ 450 NPS26 @ 400	Various Combinations	DD30	See Tab 1-PISA
	Nov-12	USM	2015 & 2025	Vic Sq @ 450 NPS26 @ 400	Various Combinations	DD35	See Tab 1-PISA
	Nov-12	USM	2015 & 2025	Vic Sq @ 450 NPS26 @ 375	Various Combinations	DD35	See Tab 1-PISA
Union Gas Risk	Dec-12	USM	2015	Various	Various Combinations	DD35, boundaries	See Tab 2-UnionRisk
SMYS	Feb-13	USM	2012, 2015 & 2025	Various	Various Combinations	Boundary Conditions: Vic Square @ 800 TJ/day, Parkway @ 1400 TJ/day, Lisgar @ 800 TJ/day, Albion Rd @ 800 TJ/day	See Tab 3-SMYS
Supply Validation	Mar-13	USM	2015 & 2025	Various	Various Combinations	Boundary Conditions: Vic Square @ 180TJ/day, Parkway + Lisgar @ 1500 TJ/day in 2015 & 1700 TJ/day in 2025, Lisgar @ 800 TJ/day, Albion Rd @ 800 TJ/day	See Tab 4-Supply
MODEL VALIDATION							

GENERAL

ASSUMPTIONS

- DD41 unless noted
- "DSM" = 0.65 unless noted
- Victoria Square dropped to 375 psi after any reinforcement added; NPS26 dropped to 275 psi after any reinforcement added
- 2013 analysis has updated Segment A pipe size and station configuration