Factor Alias	Threat & Consequence	Risk Factors		Method of Scoring Occurances (0 - 9)	Selected SME Factor Weighting (1-2) Except Excavation	Risk Model Validation, Number cases checked
COR	**Corrosion**					
CORLS		Repaired Corrosive Leaks on Active Services				
CORLM		Repaired Corrosive Leaks on Active Mains				
EPI		Exposed pipe inspections - Corrosion (Ranking of lvl of corrosion observed) Exposed pipe inspections				
CP		CP Protection (Steel Mains)				
LRC		Potential Corrosion on Steel Mains Due To DC Current from lightrail lines				
CCR		Corrosion on Continental Risers				
SCP		Steel Cased pipe				
AGEC		**Coating Deterioration by age (For Steel type materials)**	Age (Years)			
		Above Ground Paint				
			0-19			
			20-39			
			40-59			
			60+			
		Cement Cased (Code = 10)				
			0-19			
			20-39			
			40-59			
			60+			
		Save A Line (Code = 11)				
			0-19			
			20-39			
			40-59			
			60+			
		Coal Tar Tape (Code = 9)				
			0-19			
			20-39			
			40-59			
			60+			
		Epoxy Thin Film (Code= 12)				
			0-19			
			20-39			
			40-59			
			60+			
		Granny (Code = 5)				
			0-19			
			20-39			
			40-59			
			60+			
		Mill Wrapped (Code = 4)				
			0-19			
			20-39			
			40-59			
			60+			
		Plastic Tape (Code = 8)				
			0-19			
			20-39			
			40-59			
			60+			
		Somastic (Code = 3)				
			0-19			
			20-39			
			40-59			
			60+			
		Synergy (Code = 16)				
			0-19			
			20-39			
			40-59			
			60+			
		Unknown & N/A & Misc (Code = -1, 0, 14)				
			0-19			
			20-39			
			40-59			
			60+			
		X-tru Coat (Code = 6)				
			0-19			
			20-39			
			40-59			
			60+			
		Flood Coat (Code = 7)				
			0-19			
			20-39			
			40-59			
			60+			
		Fusion Bonded Epoxy (Code = 19)				
			0-19			
			20-39			
			40-59			
			60+			
		Vanguard (Code = 18)				
			0-19			
			20-39			
			40-59			
			60+			
		Bare (Steel Type) ----- All years (Code = 2)				
EQF	**Equipment Failure**					
EQLM		Leaks caused by Equipment Failure on Active mains during the last 5 yrs				
EQLS		Leaks caused by Equipment Failure on Active services during the last 5 yrs				
GVF		Gas valve failures as indicated by the most recent gas valve inspection (Remedial Action Required)				
EXV	**Excavation Damage**					
OCA		Risk of future 3rd Party Damage as indicated by recent One Call ticket activity (1 & 2 Yr)				
EXLM		Repaired leaks caused by excavation Damage on Active Mains (5yrs)				
EXLS		Repaired leaks caused by excavation Damage on Active Services (5 yrs)				
ICP	**Incorrect operation**					
ICLS		Repaired leaks caused by incorrect operations on Active Services				
ICLM		Repaired leaks caused by incorrect operations on Active Mains				

MAT	**Material, Weld and Joint Failure**				1.5	
MATM		**Main Material Risk of Failure**		SCORE	1.7	2
		Cast Iron (Code = 2)				
		P-AL Plastic (Code = 5)		5		
		P-TR Plastic (Code = 4)				
		Steel (Code = 1)				
		Thin Wall Rocket Tubing (Code = 3)				
		Unverified (Code = 6)				
		Steel (Reconditioned)				
MATS		**Service Material Risk of Failure**				
		CI (Cast Iron)				
		WI (Wrought Iron)				
		P-AL Plastic (code = 2)		3		
		Steel				
		B (Bare Steel - HP)				
		TR (TR-418 Plastic)				
		TU (Tubing)				
		Unknown/Unknown Verified				
		XT (Steel w/ plastic coating)				
		A25 (HP)				
		A30 (HP)				
		X52 (HP)				
COATM		**Coating Risk cause of Failure (For Steel Type materials only) - MAINS**				
		Above Ground Paint				
		Bare				
		Cement Cased				
		Coal Tar Tape				
		Epoxy Thin Film				
		Fusion Bond Epoxy				
		Granny				
		Mill Wrapped				
		Misc				
		N/A				
		Plastic Tape				
		Somastic				
		Synergy				
		Vanguard				
		Save A Line				
		Unknown				
		X-Tru Coat				
COATS		**Coating Risk cause of Failure (For Steel Type materials only) - SERVICES**				
		Above Ground Paint				
		Bare				
		Cement Cased				
		Epoxy Thin Film				
		Flood Coat				
		Granny				
		Mill Wrapped				
		N/A				
		Plastic Tape				
		Somastic				
		Synergy				
		Save A Line				
		Unknown				
		X-Tru Coat				
AGES		**Service Material by Age**	Age (Years)			
		B (Bare Steel - HP)				
			0-19			
			20-39			
			40-59			
			60+			
		A25				
			0-19			
			20-39			
			40-59			
			60+			
		A30				
			0-19			
			20-39			
			40-59			
			60+			
		A52				
			0-19			
			20-39			
			40-59			
			60+			
		Steel				
			0-19			
			20-39			
			40-59			
			60+			
		P-AL Plastic				
			0-19	3		
			20-39	5		
			40-59	6		
			60+	6		
		TR (TR-418 Plastic)				
			0-19			
			20-39			
			40-59			
			60+			
		TU (Tubing)				
			0-19			
			20-39			
			40-59			
			60+			
		Unknown				
			0-19			
			20-39			
			40-59			
			60+			
		XT (Steel w/ plastic coating)				
			0-19			
			20-39			
			40-59			
			60+			
		Wrought Iron				
			0-19			
			20-39			

			40-59	[redacted]		
			60+	[redacted]		
		Cast Iron				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
AGEM		**Main Material by age**	**Main Age (Years)**		1.6	4
		Cast Iron				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
		P-AL Plastic				
			0-19	3		
			20-39	6		
			40-59	7		
			60+	7		
		P-TR Plastic				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
		Steel				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
		Thin Wall Rocket Tubing				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
		Uknown				
			0-19	[redacted]		
			20-39	[redacted]		
			40-59	[redacted]		
			60+	[redacted]		
MATLS		Repaired leaks caused by material failure on Active Services		[redacted]	[redacted]	[redacted]
MATLM		Repaired leaks caused by material failure on Active MAIN		[redacted]	[redacted]	[redacted]
RNCF		Risk of Failure due to Non-Control Fitting		[redacted]	[redacted]	
RCF		Risk of Failure due to Controllable Fitting		[redacted]	[redacted]	
RGV		Risk of Failure due to Gas Valve		[redacted]	[redacted]	
RGVS		Risk of Failure due to Gas Valve Service		[redacted]	[redacted]	
NTF	**Natural Forces**				[redacted]	
NFLM		Repaired leaks caused by natural forces on Active Mains		[redacted]	[redacted]	[redacted]
NFLS		Repaired leaks caused by natural forces on Active Services		[redacted]	[redacted]	[redacted]
WATXM		Risk due to Water Crossings on Active Mains		[redacted]	[redacted]	[redacted]
WATXS		Risk due to Water Crossings on Active Services		[redacted]	[redacted]	[redacted]
FLM		Risk due to Fault Lines on Active Mains		[redacted]	[redacted]	[redacted]
FLS		Risk due to Fault Lines on Active Services		[redacted]	[redacted]	[redacted]
OTF	**Other Outside Forces Damage**				[redacted]	
RRXM		Rail Road Crossings (Mains)		[redacted]	[redacted]	[redacted]
RRXS		Rail Road Crossings (Services)		[redacted]	[redacted]	[redacted]
OFLM		Repaired leaks caused by other outside Forces on active Mains		[redacted]	[redacted]	[redacted]
OFLS		Repaired leaks caused by other outside Forces on active Services		[redacted]	[redacted]	[redacted]
RSNR		Risk due to Post, Box or Can Type Regulator Station Next to Roadway		[redacted]	[redacted]	[redacted]
AGPM		Above Ground Pipe - MAINS		[redacted]	[redacted]	[redacted]
AGPS		Above Ground Pipe - SERVICES (Excluding meters and risers, delivery pts)		[redacted]	[redacted]	[redacted]
		(Future Factor: add a polygon to capture snow damage to meters, need work flow process to capture mitigation)				
OTR	**Other**				[redacted]	
[redacted]		[redacted]		[redacted]	[redacted]	
[redacted]		[redacted]		[redacted]	[redacted]	
COF	**Consequence**					
POP		Population Density		0 = 0-100, 2 = 101-500, 4 = 501-1000, 6 = 1001-2000, 8 = 2001-5000, 9 = 5001-10000	1.8	1
BUS		Business districts		4 = No, 6 = Yes	1.7	1
MDIAM		**Main Diameter**			1.7	
		Unknown		9		
		1/8"		1		
		1/2"		1		
		3/4"		1		
		1"		1		
		1 1/4"		1		
		1 1/2"		1		
		2"		1		
		2 1/2"		2		
		3"		2		
		3 1/2"		2		
		4"		2		
		5"		3		
		6"		3		
		8"		3		
		10"		4		
		12"		4		
		14"		5		
		16"		5		
		18"		5		
		20"		5		
		24"		5		
PAB		**Service Diameter**	**Code**		17	
		Unknown/Unknown Verified	Code = 0, -1	9		

		1/8"	7	1		
		1/2"	13	1		
		3/4"	17	1		
		3/8"	11	1		
		5/8"	15	1		
		1"	1	1		
		1 1/4"	23	1		
		1 1/2"	28	1		
		2"	2	1		
		2 1/2"	36	2		
		3"	3	2		
		4"	4	2		
		5"	5	3		
		6"	6	3		
		8"	8	3		
		10"	10	4		
		12"	12	4		
		16"	16	5		
		18"	18	5		
		Public Assembly Buildings (Critical)		Hospitals = 4; Schools = 3; Nursing Homes = 3; Churches = 2	1.5	1
				Threat Total	13.5	