

Mechanical Damage Prevention - Technology Research

	Subsurface Mapping/Locating (Onshore/Offshore)	Expected Results	Boring Equipment /HDD Sensing	Expected Results	Encroachment Monitoring (Ground/Under Water)	Expected Results	Encroachment Monitoring (Air)	Expected Results
Liquid	1 Surface Mapping of underground pipelines / Peter Czipott-Quantum Magnetics-GE	>3 yrs	1		1 Use of Unmanned Underwater Vehicle (UUV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment, Inc. / OPS DTPH56-05-T-0004 (170), Delphi Corp, PRCI, Zairil Enterprises, Oceaneering, Oionfinity,	< 1 yr	1 Use of Unmanned Air Vehicle (UAV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment Inc. / OPS DTPH56-05-T-0004 (169) & Delphi Corp, PRCI, Zairil Enterprises, Oceaneering, Oionfinity	< 1 Yr
	2 Use of Unmanned Underwater Vehicle (UUV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment, Inc. / OPS DTPH56-05-T-0004 (170), Delphi Corp, PRCI, Zairil Enterprises, Oceaneering, Oionfinity,	< 1 yr	2		2 Effectiveness of Prevention Methods for Excavation Damage / Qishi Chen, C-Fer Technologies / OPS DTRS56-04-T-0006 (147) & PRCI	0 -1 Yrs	2 Pipeline Monitoring Using Satellites / Moness Rizkala-Visitless Integrity Assessment	>3yrs
	3		3		3 Infrasonic frequency seismic sensor system for preventing third party damage to gas pipelines / Daphne D'Zurko, Northeast Gas Association / OPS DTRS56-04-T-0007 (151), NYSEARCH, Northeast Gas Association, PSI Corp	1-3 Yrs	3 Automatic Detection of Encroachment Events Using Satellites / Desmond Power-C-CORE	1-3 yrs
	4		4		4 Real Time Acoustic Monitoring of Pipelines / Jim Heubler-GTI / Brian Leis-Battelle	1-3 Yrs		
	5		5		5 Real Time Acoustic Monitoring of Pipelines / Scott Thetford-GE	<1 Year		
					6 Real Time Monitoring of Pipelines for 3rd Party; Contact Using Electrical Impedance / Gary Burkott-SwRI DOE-SoCal-Duke Energy	1-3 Yrs		
Gas Transmission	1 Surface Mapping of underground pipelines / Peter Czipott-Quantum Magnetics-GE	>3 yrs	1		1 Use of Unmanned Underwater Vehicle (UUV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment, Inc. / OPS DTPH56-05-T-0004 (170), Delphi Corp, PRCI, Zairil Enterprises, Oceaneering, Oionfinity,	< 1 yr	1 Use of Unmanned Air Vehicle (UAV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment Inc. / OPS DTPH56-05-T-0004 & PRCI	< 1 Yr
	2 Use of Unmanned Underwater Vehicle (UUV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment, Inc. / OPS DTPH56-05-T-0004 (170), Delphi Corp, PRCI, Zairil Enterprises, Oceaneering, Oionfinity,	< 1 yr	2		2 Effectiveness of Prevention Methods for Excavation Damage / Qishi Chen, C-Fer Technologies / OPS DTRS56-04-T-0006 (147) & PRCI	< 1 yr	2 Pipeline Monitoring Using Satellites / Moness Rizkala-Visitless Integrity Assessment	>3yrs
	3		3		3 Infrasonic frequency seismic sensor system for preventing third party damage to gas pipelines / Daphne D'Zurko, Northeast Gas Association / OPS DTRS56-04-T-0007 (151), NYSEARCH, Northeast Gas Association, PSI Corp	1-3 Yrs	3 Automatic Detection of Encroachment Events Using Satellites / Desmond Power-C-CORE	1-3 yrs
	4		4		4 Real Time Acoustic Monitoring of Pipelines / Jim Heubler-GTI / Brian Leis-Battelle	1-3 Yrs		
					5 Real Time Acoustic Monitoring of Pipelines / Scott Thetford-GE	<1 Year		
					6 Real Time Monitoring of Pipelines for 3rd Party; Contact Using Electrical Impedance / Gary Burkott-SwRI / DOE-SoCal-Duke Energy	1-3 Yrs		
Gas Distribution (Steel)	1 Surface Mapping of underground pipelines / Peter Czipott-Quantum Magnetics-GE	>3 yrs	1		1 Effectiveness of Prevention Methods for Excavation Damage / Qishi Chen, C-Fer Technologies / OPS DTRS56-04-T-0006 (147) & PRCI	< 1 yr	1 Use of Unmanned Air Vehicle (UAV) for Pipeline Surveillance to Improve Safety and Lower Cost / Ian Wood, Electricore, Inc.; Deborah Jelen, AeroVironment Inc. / OPS DTPH56-05-T-0004 & PRCI	< 1
	2		2		2 Infrasonic frequency seismic sensor system for preventing third party damage to gas pipelines / Daphne D'Zurko, Northeast Gas Association / OPS DTRS56-04-T-0007 (151), NYSEARCH, Northeast Gas Association, PSI Corp	1-3 Yrs	2 Pipeline Monitoring Using Satellites / Moness Rizkala-Visitless Integrity Assessment	>3yrs
	3		3		3 Real Time Acoustic Monitoring of Pipelines / Jim Heubler-GTI / Brian Leis-Battelle	1-3 Yrs	3 Automatic Detection of Encroachment Events Using Satellites / Desmond Power-C-CORE	1-3 yrs
	4		4		4 Real Time Acoustic Monitoring of Pipelines / Scott Thetford-GE	<1 Year		
					5 Real Time Monitoring of Pipelines for 3rd Party; Contact Using Electrical Impedance / Gary Burkott-SwRI DOE-SoCal-Duke Energy	1-3 Yrs		
Gas Distribution (Non-Metallic)								