

Matrix of ***Nonmetallic*** Pipe Monitoring Applications  
 Gravity Flow, Vacuum (V), Pressure (P), and Interstitial Liquid Level Monitoring (ILLM)  
 (Enclosure to State Water Board letter dated February 29, 2008; Matrix Updated September 8, 2008)

Nonmetallic Pipe Manufacturer		UL 971 pipe date stamped on or after July 1, 2005		
Brand	Secondary Containment Type and Size (Coaxial reported as ID of PS; SOS reported as OD of SC)	Fuels <sup>6</sup>	Open (min. 5 psi rating on SC per UL)	Closed (min. 50 psi rating on SC per UL)
			Gravity Flow or Ambient ILLM	Vacuum, Pressure, or Pressurized ILLM
Ameron <b>Dualoy 3000/L</b>  <b>Dualoy 3000/LCX</b>	Rigid; SOS; 3" & 4" Rigid; SOS; 6" Rigid; Coaxial (sticks); 2" & 3" Rigid; Coaxial (sticks); 4"	MV,CT,HB,AM MV,CT,HB,AM MV,CT,HB,AM MV,CT,HB,AM	Gravity Flow Gravity Flow Gravity Flow, AILLM <sup>1</sup> Gravity Flow, AILLM <sup>1</sup>	V, P None V, P, PILLM <sup>1</sup> None
Franklin Fueling/APT <b>XP-150-SC</b> <b>XP-100, 175, 200</b>	Flexible; Coaxial (coil); 1½" Flexible; Coaxial (coil); 1", 1¾", & 2"	MV,CT,HB,AM MV,CT,HB,AM	Gravity Flow Gravity Flow	V None
IPP <b>Petroplas SF<sub>2</sub>P</b>	Flexible; Coaxial (coil); 2" Flexible; Coaxial (coil); 3" Flexible; Coaxial (sticks); 2" & 3"	MV,CT,HB,AM MV,CT,HB,AM MV,CT,HB,AM	Gravity Flow Gravity Flow Gravity Flow	None V, P None
NUPI <b>Smartflex</b>	Flexible; Coaxial (coil); 2", 2½", & 5" Flexible; Coaxial (sticks); 2", 4" & 5"	MV,CT,HB,AM MV,CT,HB,AM	Gravity Flow Gravity Flow	V, P V, P
OPW-FCS <b>C15, C20, C30</b> <b>C75, C10<sup>4</sup></b> <b>PGFC-2150<sup>5</sup></b>	Flexible; Coaxial (coil); 1½", 2", & 3" Flexible; Coaxial (coil); ¾" & 1" Flexible; Coaxial (coil); 1½"	MV,AM MV,AM MV,AM	Gravity Flow Gravity Flow Gravity Flow	None V,P V,P
PetroTechnik <b>UPP</b>	Flexible; Coaxial (coil); 1½", 2" Flexible; Coaxial (sticks); 1½", 2", 3", 4"	MV,CT,HB,AM MV,CT,HB,AM	Gravity Flow Gravity Flow	V, P V, P
Smith Fibercast <b>Red Thread IIA</b>	Rigid; SOS; 3" & 4"	MV,CT,HB,AM	Gravity Flow	V, P
Western Fiberglass <b>Co-Flex</b> <b>Co-Flex<sup>4</sup></b> <b>Co-Flex<sup>3</sup></b>	Flexible; Coaxial (coil); 1½", 2", & 3" Flexible; Coaxial (coil); ¾" & 1" Flexible; Coaxial (coil); 1½"	MV,AM MV, AM MV,AM	Gravity Flow, AILLM <sup>2</sup> Gravity Flow, AILLM <sup>2</sup> Gravity Flow, AILLM <sup>2</sup>	None V,P, PILLM <sup>2</sup> V,P, PILLM <sup>2</sup>

1. Use only with Ameron's Brine Filled Interstitial Space Monitoring System (limited to maximum length of 344 feet).
2. Use only with Western Fiberglass Co-Flow Hydraulic Interstitial Monitoring System (limited to maximum length of 200 feet).
3. Procedures to verify the appropriate pipe for V or P applications include inspection in the field for a date stamp equal to or after November 30, 2006, and a marking of "50 PSI" on the secondary containment.
4. Procedures to verify the appropriate pipe for V and P applications include inspection in the field for a date stamp equal to or after January 29, 2008 and a marking of 50 PSI" on the secondary containment.
5. Procedures to verify the appropriate pipe for V or P applications include inspection in the field for a date stamp equal to or after November 16, 2006, and a marking of "50 PSI" on the secondary containment.
6. E85 is covered within the CT fuels testing range; therefore only pipe with the CT fuels marking can store E85.

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*(Enclosure to State Water Board letter dated February 29, 2008; Matrix Updated September 8, 2008)*

Metallic Pipe Manufacturer		UL 971A		
Brand	Secondary Containment Type and Size (Coaxial reported as ID of PS; SOS reported as OD of SC)	Fuels	Open (min. 5 psi rating on SC per UL)	Closed (min. 50 psi rating on SC per UL)
			Gravity Flow or Ambient ILLM	Vacuum, Pressure, or Pressurized ILLM
Brugg Flexwell	Flexible; Coaxial (coil); 1½" & 2"	MV,CT,HB,AM	Gravity Flow	V,P

### Acronyms used in the Matrix of Pipe Monitoring Applications

Acronym	Definition
UL	Underwriters Laboratories Inc.
ID	Internal Diameter
OD	Outside Diameter
SOS	Size over Size
SC	Secondary Containment
V	Vacuum
P	Pressure
ILLM	Interstitial Liquid Level Monitoring
AILLM	Ambient Liquid Level Monitoring
PILLM	Pressurized Liquid Level Monitoring
MV	Motor Vehicle
CT	Concentrated
HB	High Blend
AM	Aviation & Marine