TR 2022-25 – GM – Notification for Composite Materials

TR Number	2022-25
Primary	192.18
Secondary	192.9(h)(2)
Purpose	Review and revise GM to address the notification requirements of Amdt 192-129.
Origin/Rationale	To provide guidance on the required information to be included in a notification to PHSMA for use of composite materials in Type C lines.
Notes	This TR may require a change in scope to TR 22-07.
Assigned to	Design

Note: *Revisions are shown in yellow highlight and red font.*

Changes that have been approved by Public Review and will be in 2025 Edition; changes are shown in green font.

Section 192.9

~~*This guide material is under review following Amendments 192-129, 192-130 and 192-132.*~~

1 GENERAL

(a) See §§192.1 and §192.8(c)(3) for gathering lines excluded from the provisions of Part 192.

(b) See the "Glossary of Commonly Used Terms" under §192.3 for definitions of "*Otherwise changed*" and "*Part 192 regulated gathering lines.*"

(c) See guide material under §192.8 for regulated gathering line definitions.

(d) See Guide Material Appendix G-192-22.

*[**Editorial note**: Below guide material is all new and therefore is not underlined]*

2 COMPOSITE MATERIALS IN TYPE C GATHERING LINES

2.1 Use of composite materials in Type C gathering lines.

(a) Operators with composite materials (see definition in §192.3) installed ~~in~~ as a Type C gas gathering line (see guide material under §192.8) ~~service~~ before May 16, 2022 that require replacement, or with plans to install composite materials in a Type C gathering line after May 16, 2022 (effective date of Amdt. 192-129), must submit a notification to PHMSA and applicable state agency in accordance with §192.18 at least 90 days prior to the replacement or planned installation (§192.9(h)(2)).

(b) Notification to PHMSA and the applicable state agency should be submitted at the same time.

(c) The notification must include the information listed below (§192.9(h)). Note that the source material for the list of requirements found in §192.9(h) was based upon the Special Permits requirements found in §190.341(c).

(d) If no response and no objection per §192.18 is received from PHMSA, work may commence on or after day 91 following submittal as planned.

2.2 Location of the existing pipeline or planned project.

(a) Beginning and endpoints must be identified, and the information provided must identify the state and parishes/counties where the existing line is, or proposed line will be located (§192.9(h)(2)).

~~(b) Operators use techniques or data types since reviewers of the notification might not be familiar with the specifics of the project area (192.9(h)(2)(i)).~~

~~(i) Stationing, by either footage or mileage, as appropriate.~~
~~(ii) Latitude and longitude coordinates, to enable mapping application(s) review and specifically at beginning and endpoints.~~

(b) Consideration of including the following information might also provide the reviewer with a better understanding of the right-of-way.
~~(iii)~~(1) Screen capture from mapping application(s) as an appendix to the notification.
~~(iv)~~(2) Identifying buildings intended for human occupancy or other impacted sites as defined in §192.9(f)(3) along the intended route and offset distance from the existing or proposed pipeline.
~~(v)~~(3) Locations of road crossings, including roadway type (e.g., highway, unpaved lease road) and railroads.
~~(vi)~~(4) Shared right-of-way, pipeline crossings, or other operational information.

2.3 Specifics of the composite pipe and fitting material design (Subparts B, C, and D).

This section addresses the requirements in §192.9(h)(2)(iii) and (iv) to describe relevant design and relevant operating information unique to the composite material proposed for use.

(a) Operators must include information about the pipe and fitting materials (§192.9(h)(2)(iii)). The pipe manufacturer should be able to provide the necessary test and material qualification information. The notification should include the following information.
(1) Manufacturing specification(s) applicable to the proposed pipe and fittings.
(2) Maximum pressure rating as established by the manufacturer including applicable supporting test and qualification data provided by the manufacturer.
(3) Maximum and minimum temperature permissible during installation and operation.
(4) Management of permeated gases, as applicable.
(5) Chemical compatibility with product transported (e.g., H_2S limitations).
(6) Types of fittings used to join pipe.
~~(vii) Qualifications and training for personnel performing joints.~~

(b) If the operator has existing pipe of the same material, operational experience could include the following (§192.9(h)(2)(iv) and (v)).
(1) Number of miles currently operated.
(2) Length of time composite pipe materials have been in use.
(3) Numbers of failures or leaks and cause, if applicable.
(4) Other operational issues.

2.4 Construction information unique to the composite material.

This section addresses the requirements in §192.9(h)(2)(iii) to describe relevant construction specifications unique to the composite material proposed for use.

(a) Describe construction ~~procedures~~ specifications (§192.9(h)(2)(iii)) the operator will follow for installation of the composite pipe and fittings that differ from construction requirements listed in §192.9(e)(1)(i). These might include the following.
(1) Visual inspection prior to installation.
(2) Lifting and handling of reels or coils.
(3) Unspooling, especially in cold weather.
(4) Bedding and backfill specifications that may be unique to the composite pipe.
(5) Minimum bend radii permitted.
(6) Maximum tension allowed during trenchless installations and how it will be monitored.
(7) Precautions necessary for storing materials at jobsite.
(8) Required supplemental means to enable future pipe locating.
(9) Qualifications and training for personnel performing joints.

(b) Post-construction pressure test.
Stabilization of composites after introduction of water during the hydrostatic test will differ from ~~traditional~~ steel pipe. Manufacturer guidance or equivalent should be considered and included, if appropriate.

(c) Cathodic protection.
(1) If cathodic protection is to be installed, describe the unique installation techniques for attaching anodes, test leads or impressed current leads.
(2) If fittings require individual protection, describe plans for monitoring (§192.9(h)(2)(vii)).

2.5 Operations and maintenance.

(a) Describe unique operations or maintenance procedures per §192.9(h)(2)(vii) that are applicable to the selected pipe or fittings.
~~(b) The operator may revise or adopt procedures unique to the composite pipe and fittings into O & M procedures, prior to placing pipeline into service. Methods to accomplish this requirement might include modification of each section of current procedures or referencing separate procedures which are stand-alone and unique to the selected composite material.~~
~~(c)~~(b) Describe methods for repairing the composite pipe ~~should be described~~ (§192.9(h)(2)(vii)).
~~(d)~~(c) Describe ~~intent and~~ methodologies for management of permeated gases ~~that~~ might be necessary (§192.9(h)(2)(vii)).
(d) The operator may revise or adopt procedures unique to the composite pipe and fittings into O&M procedures, prior to placing pipeline into service. Methods to accomplish this requirement might include modification of each section of current procedures or referencing separate procedures that are stand-alone and unique to the selected composite material.

2.6 Risk mitigation and public benefit.

The operator ~~should~~ must describe benefits anticipated by using the composite material when compared to constructing the same project using ~~traditional~~ steel or plastic pipe (§192.9(h)(2)(viii)). Consider the following topics for inclusion, if applicable.
(a) Elimination of the threat of internal corrosion typically associated with transportation of unprocessed gas from production facilities.
(b) Reduction in the amount of equipment necessary to install the pipe resulting in a reduction of combustion engine emissions
(c) Elimination or reduction in the need for welding equipment resulting in a reduction or elimination of combustion engine emissions.
(d) Reduction in personnel, reducing the potential for injuries.
(e) Reduction of hot work activities, such as welding and grinding, minimizing the potential for wildfires in arid locations.
(f) Reduction in number of joints versus welds, minimizing the potential for leak paths and human error.
(g) Reduction of right-of-way width, minimizing environmental impact, damage to vegetation, and potential for erosion.
(h) Flexible composites might be more resistant to damage in areas where subsidence and slippage occur.

2.7 Integrity evaluation.

The operator must ~~describe planned~~ explain procedures or tests ~~or examinations~~ it will conduct over the life of the composite pipeline material ~~which will confirm continued~~ to document material strength is being maintained (§192.9(h)(2)(vi)). These might include the following.
(a) Installation of a multi-segment section of pipeline in parallel with an operating pipeline wherein segments can be removed and destructively tested.
(b) Extraction and examination of pipe segments on an opportunistic basis, such as third-party damage, removal of a segment to install a lateral, or during abandonment.
(c) Excavation of portions of one pipeline in same service and geographical proximity to serve as a representative sample for others in like-kind service.
(d) Periodic pressure testing.

2.8 Management commitment.

Prior to certification required by §192.9(h)(2)(ix), ~~C~~consider consulting legal counsel for review prior to submission. ~~The notification must be signed by an individual with the title of vice-president (or equivalent or higher officer) of the operator submitting the notification per §192.9(h)(2)(ix).~~

2.9 Repair or replacement.

If the notification is being submitted for a repair or replacement segment of composite pipeline that existed on or before May 16, 2022, then the applicable information above should be provided, accompanied by the reason repair or replacement is required per §§ 192.9(e)(1)(i), 192.9(f)(2), and 192.9(h).