



The Power of the “Q”





Who is QUANTA SERVICES



About Quanta Services

- Quanta Services (NYSE: PWR) is a leading provider of specialized contracting services, delivering infrastructure solutions to the electric power and oil and gas and pipeline industries.
- Quanta offers a winning combination of resources. We deliver:
 - Access to the industry's largest equipment fleet and workforce resources.
 - ~ 20,000 employees with major offices in 40 states and field operations across the United States and Canada.
 - ~ \$6 Billion annual revenue and largest North American contractor for:
 - Electrical power
 - Natural gas distribution
 - Pipeline construction
 - **Engineering / Field Services**
 - A strong balance sheet with financial resources for capital-intensive projects.
 - Strong cash position with no commercial debt
 - Inclusion in the S&P 500 Index, the most widely followed index of large-cap stocks actively traded in the United States.
 - ~ \$6 Billion market cap

Quanta's Operating Units

You may recognize some of our flagship companies....

This is our Oil & Gas Group and it is growing...



Quanta's North American Footprint

HQ – Houston / Engineering – Tulsa / Field Services – Kansas City

- OSHA National Safety Partnership Founding Member
- Quanta has over 150 full-time dedicated safety and training professionals.
- Quanta spends tens of millions on safety annually.
- 300,000 hours annually are dedicated for employee training.



◆ Headquarters

● Offices

A Quanta Services Company

QPS Engineering, LLC

QPS Engineering, LLC

Full engineering, procurement and construction (EPC) capabilities.

Expertise

- Mainline pipeline systems
- Compressor, pump & meter stations
- Distribution systems
- Midstream & gathering facilities
- Processing facilities
- Storage and terminal facilities

Engineering Services

- Project management
- Engineering
- Design
- Procurement
- Integrity management

Field Services

- Survey
- ROW acquisition
- Material logistics
- Construction management
- Corrosion control
- Environmental
- Safety

Construction Services

- Pipeline
- Facilities
- HDD's
- Integrity remediation



ISO 9001:2008 - CERTIFIED

QPS Engineering, LLC

Field Services – Land Survey

Land Survey / Engineering

- ROW acquisition support
- DOT Engineering & Land Surveys
- ALTA/ACSM Land Title Surveys
- Boundary Surveys
- Certificate of Surveys
- Cadastral Surveys
- Subdivision Surveys
- Easement Surveys
- Plat Preparation
- Topographic Survey (for design)
- Construction Staking / As-Built Survey
- FEMA Elevation Certificate and LOMA Surveys
- GPS Surveys
 - Control
 - Aerial Mapping
- Right of Way Surveys
- Legal Descriptions

Pipeline / Transmission / Route

- ROW Acquisition support
- Well and pad locations
- Route Reconnaissance
- Route mapping
- Preliminary survey for pipeline
- Environmental Support Surveys
- Easements and Exhibits
- Lease / access roads
- Facilities
- Permit drawings
- Alignment sheets
- HDD and bore drill diagrams
- Construction Staking & As-built Surveys
- Regulatory support
- Web-based progress and status reporting
- Custom and commercial-off-the-shelf data model construction
- Integrity remediation
- Wetland Surveys
- Utility Seeps / Utility Locates



Environmental - Overview

QPSE Moon Township office provides environmental services for Oil and Gas development and projects on Tribal Lands

- National Environmental Policy Act (NEPA) review
 - Environmental Assessment (EA) and Environmental Impact Statement (EIS) development
- Environmental Due Diligence
- Desktop delineation
- Field inventories
- Technical writing



OPS ENGINEERING, LLC

A QPSE COMPANY

Engineering / EPC

Environmental Skill Set Summary

Environmental Services

- Technical Writing
- Permitting and approvals
- Mapping and ArcGIS
- Site evaluation
- Environmental due diligence
- T&E Species identification
- Wetland delineation
- Agency coordination
- Engineering
- Sub-consultant management
- Proposal Development
- Cost Estimates

Skill Set continued

Michele Seib, P.E.

Skills:

- *Sediment and Erosion Control Design
- *Stormwater Management
- *Construction Management
- *FEMA Floodplain Analysis
- *Permitting
- *Site Plans/Grading Plans
- *Hydrologic & Hydraulic Analysis
- *GIS Analysis & Mapping
- *Project Management

Experience:

1. Well Pad Development and Permitting sites in Ohio.
2. Virginia Capital Trail (Varina & New Market Heights Phases), Hydrologic and Hydraulic Analysis, Richmond Virginia.
3. National Institutes of Health North Drive Bridge Replacement, Bethesda, Maryland
4. National Flood Insurance Program, Hydrologic and Hydraulic Analysis, Flood Mapping, Community Outreach, Nationwide.
5. NAVFAC Washington Utility and Energy Audit, Washington DC Metro Area
6. Professional Engineer License: MD, VA, PA, WV, OH, MI

PHMSA Draft Integrity Verification Process

MAOP Records Validation

Why The Need to Enhance Safety

PHMSA Advisory Bulletin (Jan. 4, 2011)

1. Establishing MAOP (or MOP) Using Record Evidence

As PHMSA and NTSB “recommended”, **operators relying on the review of design, construction, inspection, testing and other related data to calculate MAOP or MOP must assure that the records used are reliable.** An operator must diligently search, review and scrutinize documents and records, including but not limited to, all as-built drawings, alignment sheets, and specifications, and all design, construction, inspection, testing, maintenance, manufacturer, and other related records. **These records shall be traceable, verifiable, and complete.** If such a document and records search, review, and verification cannot be satisfactorily completed, the operator cannot rely on this method for calculating MAOP or MOP.

2. Subsequent paragraphs cover data integration and risk analyses.

Why The Need to Enhance Safety

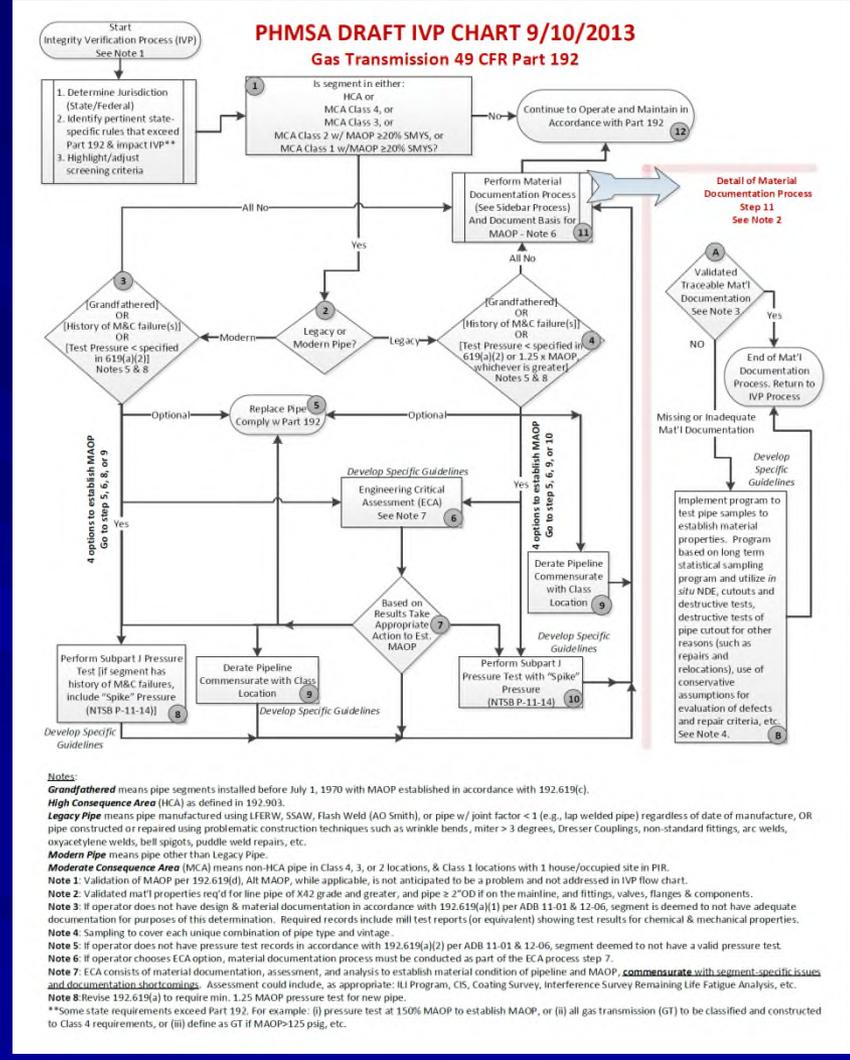
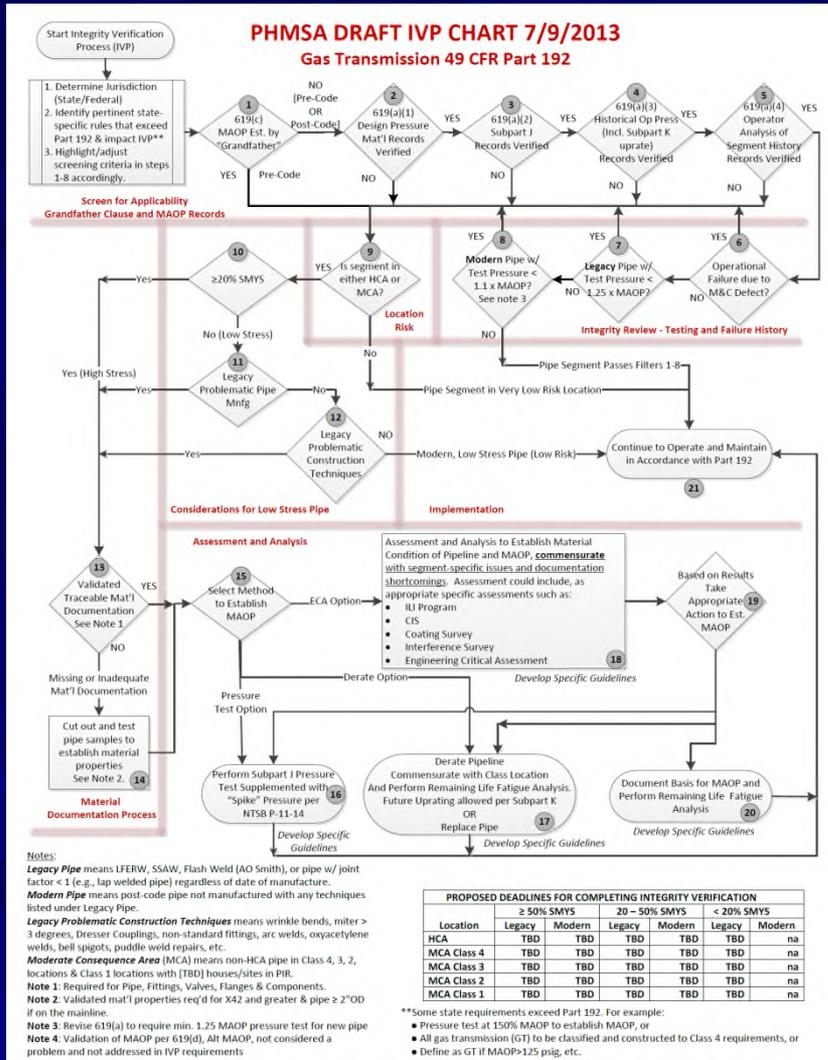
PHMSA Advisory Bulletin (May 1, 2012)

The National Transportation Safety Board (NTSB) recommended that PHMSA should:

Amend DOT 192.619 to **delete the grandfather clause** and require that all gas transmission pipelines constructed before 1970 be subjected to a hydrostatic pressure test that incorporates a spike test. (P-11-14)

Traceable , Verifiable and Complete records

PHMSA Proposed IVP Chart



DOT 192.619

Maximum and minimum allowable operating pressure; Steel or plastic pipelines

(a) No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:

(1) The design pressure of the weakest element in the segment, determined in accordance with subparts C and D of this part. However, for steel pipe in pipelines being converted under § 192.14 or uprated under subpart K of this part, if any variable necessary to determine the design pressure under the design formula (§ 192.105) is unknown, one of the following pressures is to be used as design pressure:

- (i) Eighty percent of the first test pressure that produces yield under section N5 of Appendix N of ASME B31.8 (incorporated by reference, see § 192.7), reduced by the appropriate factor in paragraph (a)(2)(ii) of this section; or
- (ii) If the pipe is $12\frac{3}{4}$ inches (324 mm) or less in outside diameter and is not tested to yield under this paragraph, 200 p.s.i. (1379 kPa).

PHMSA Advisory Bulletin (Jan. 4, 2011)

Traceable

Verifiable

Complete

Data Gathering and Use

DOT Part 192 Subpart J Pressure Testing Records

Pressure Test Information								
Opera Name	Employee	Contractor	Test Medium	Test Pressure	Test Duration	Charts or Logs	Elev.	Leaks

Type of Pressure Test:

Spike Test – why ?

Regulatory Guidance

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THANK YOU