



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

1200 New Jersey Ave, S.E.  
Washington, D.C. 20590

**OCT 8 2010**

Mr. Ed Teng  
Vice President – Engineering  
Anchor Point Energy, LLC  
1421 Blake Street  
Denver, CO 80202

**Docket No. PHMSA-2010-0063**

Dear Mr. Teng:

On February 25, 2010, Anchor Point Energy, LLC (APE) wrote to the Pipeline and Hazardous Materials Safety Administration (PHMSA) requesting a special permit to waive compliance from PHMSA's pipeline safety regulation in 49 CFR § 192.121 - Design of plastic pipe, for one segment of the North Fork Pipeline natural gas transmission pipeline system located in the Kenai Peninsula Borough, Alaska, near Anchor Point, Alaska. For reinforced thermosetting plastic pipe, § 192.121 restricts the hydrostatic design basis (HDB) to 11,000 psig (75,842 kPa). The special permit request was amended and resubmitted to PHMSA on May 28, 2010, clarifying that the requested special permit would only apply to Class 1 locations and areas outside of high consequence areas.

PHMSA is granting this special permit (enclosed), which will allow APE to instead calculate the HDB limit in accordance with a national standard, The American Society for Testing and Materials (ASTM) D-2517, "Standard Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings" (ASTM D-2517). When the HDB is calculated according to ASTM D-2517, the resulting maximum allowable operating pressure (MAOP) of the pipe would be 1328 psig. This special permit provides relief from the Federal pipeline safety regulations for the North Fork Pipeline and requires APE to comply with certain conditions and limitations designed to maintain pipeline safety.

PHMSA grants this special permit based on the findings set forth in the "Special Permit Analysis and Findings" document, which can be read in its entirety in Docket No. PHMSA-2010-0063, in the Federal Docket Management System (FDMS) located on the internet at [www.Regulations.gov](http://www.Regulations.gov).

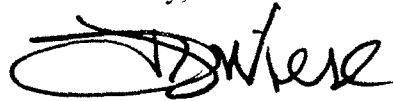
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Mr. Ed Teng

PHMSA-2010-0063 --- Anchor Point Energy, LLC

My staff would be pleased to discuss this special permit or any other regulatory matter with you. John Gale, Director of Regulations (202-366-4046), may be contacted on regulatory matters and Jeffery Gilliam, Director of Engineering (202-603-1550) may be contacted on technical matters specific to this special permit.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Wiese". The signature is stylized with a large, looping initial "J" and a cursive "Wiese".

Jeffrey D. Wiese

Associate Administrator for Pipeline Safety

Enclosure: Special Permit

**U.S. DEPARTMENT OF TRANSPORTATION**  
**PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA)**  
**SPECIAL PERMIT**

Docket Number: PHMSA-2010-0063  
Requested By: Anchor Point Energy, LLC  
Date Requested: May 28, 2010  
Code Sections: 49 CFR § 192.121

**Grant of Special Permit:**

By this order, subject to the terms and conditions set forth below, the Pipeline and Hazardous Materials Safety Administration (PHMSA) grants this special permit to Anchor Point Energy, LLC (APE), waiving compliance from 49 CFR § 192.121 for a proposed 6.3-mile segment of intrastate natural gas transmission pipeline located in the Kenai Peninsula Borough, Alaska, near Anchor Point as described below.

**Special Permit Segment:**

***Kenai Peninsula Borough, Alaska***

PHMSA waives compliance from 49 CFR § 192.121 for one (1) segment of APE's dual 4.5-inch diameter intrastate natural gas transmission pipelines made of Fiberspar FS LPJ 4.5-inch 2250(E) line pipe (Fiberspar), a reinforced thermoset plastic material. If constructed, the pipeline would be located in the Kenai Peninsula Borough, Alaska, near Anchor Point. The Federal Pipeline Safety Regulations in 49 CFR § 192.121 limit the hydrostatic design basis (HDB) of this class of pipe material to 11,000 pounds per square inch gauge (psig). Using an HDB of 11,000 psig would limit the pipeline pressure to a maximum of 464 psig. This special permit allows APE to instead calculate the HDB limit in accordance with a national standard, The American Society for Testing and Materials (ASTM) D-2517, "Standard Specification for Reinforced Epoxy Resin Gas Pressure Pipe and Fittings" (ASTM D-2517). When the HDB is calculated according to ASTM D-2517, the resulting maximum allowable operating pressure (MAOP) of the pipe would be 1328 psig.

This special permit applies to the *special permit segment* defined as follows using APE mile post (MP) references:

- *Special permit segment - North Fork Pipeline* – 33,200 feet, Mile Post 1.10 to Mile Post 7.39.

The *special permit segment* consists of two, parallel buried 4.5-inch Fiberspar pipelines, and does not apply to aboveground piping or facilities, nor does it apply to pipe of dimensions or materials other than those listed in the first paragraph of this section. However, certain requirements of this special permit apply to such related materials, piping, or facilities.

PHMSA grants this special permit based on the analysis set forth in the “*Special Permit Analysis and Findings*” document, which can be read in its entirety in Docket No. PHMSA-2010-0063 in the Federal Docket Management System (FDMS) located on the Internet at [www.Regulations.gov](http://www.Regulations.gov).

### **Conditions:**

The grant of this special permit is subject to the following conditions:

#### **1) Class Location and HCA Design Requirements:**

a. APE shall design and operate the *special permit segment* as follows:

- i. At or below a MAOP of 1328 psig.
- ii. With a design factor (DF) of 0.32 or less.
- iii. If any portion of the *special permit segment* becomes a Class 2, 3, or 4 location or high consequence area (HCA), at any time, APE shall remove and replace that portion of Fiberspar pipe with steel line pipe.
- iv. APE shall treat the *special permit segment* as if the entire segment is a covered segment and shall develop and follow an integrity management program in accordance with the requirements of 49 CFR Part 192, Subpart O applicable to plastic transmission pipelines.
- v. APE shall include its integrity management program as a part of its Operations & Maintenance (O&M) Manual.

## 2) General and Design Requirements:

- a. **Branches:** APE shall not tap, branch, or split the *special permit segment* Fiberspar pipe except as necessary to comply with Condition 4(i).
- b. **Pipeline weights and negative buoyancy:**
  - i. APE shall install pipeline weights in an amount and location such that, when combined with backfill material, provide a net negative buoyancy on the pipeline.
  - ii. APE shall ensure that a geotechnical engineer is present at and observes excavation and backfill activities. The purpose of this requirement is to ensure that pipeline weights are installed correctly, at the proper locations, and are appropriate for the site specific soil and groundwater conditions.
  - iii. APE shall survey the location, size, and depth of placement for all pipeline weights and include this information on the as-built plans.

## 3) Trenching Requirements:

- a. **Trenching:** APE shall install pipe within the *special permit segment* by open trench. APE shall not install pipe using horizontal directional drilling or boring in the *special permit segment*.
- b. **Minimum Separation:** The minimum separation between the two (2) parallel pipelines in the *special permit segment* shall be a minimum of 12 inches.

## 4) Material and Testing Requirements:

- a. **Pipe Layers:** APE shall install line pipe in the *special permit segment* that is comprised of high density polyethylene (HDPE) PE4710 inner and outer layers made from natural gas pipe grade material, which meet the material requirements of ASTM D-2513 (2009a), "Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings" (ASTM D-2513).
- b. **Regrind and Rework of Polymeric Materials.** Materials used in the manufacture of the pipe installed within the *special permit segment*, during construction or in future repairs or replacement, may not contain any regrind or rework material.

- c. Outdoor Pipe Storage:** APE shall comply with ASTM D-2513 requirements for outdoor storage and ultraviolet radiation exposure of polyethylene (PE) pipe for all Fiberspar pipe materials used in the *special permit segment*. APE shall document processes for compliance with ASTM D-2513 in its O&M Manual.
- d. Pigging:** APE shall work with the pipe manufacturer to ensure that in-line inspection (ILI) tools and maintenance pigs will not damage or degrade the pipe.
- i.** APE shall document and implement detailed O&M procedures for use of ILI tools along with Operator Qualifications (OQ), Construction OQ (COQ) requirements, lessons learned documents, and best practice findings with related presentations.
  - ii.** APE shall conduct any necessary research & development (R&D) necessary to comply with this condition. APE shall present the findings of such R&D to Director, PHMSA Western Region.
  - iii.** APE shall develop and submit procedures for use of ILI tools to the Director, PHMSA Western Region within one (1) year of this special permit grant.
- e. Calculation of Pipe Design Parameters:** APE shall determine the hydrostatic design basis (HDB) and long term hydrostatic strength (LTHS) information used for the calculation of design parameters in accordance with ASTM D-2992 (2006) “Standard Practice for Obtaining Hydrostatic or Pressure Design Basis for ‘Fiberglass’ (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings” Paragraph 14.1 for a representative sized pipe, using the same composition as the pipe used within the special permit segment.
- f. Cyclic Survival Tests:** APE shall perform a 1,000-hour minimum survival test on the pipe used in the *special permit segment*. The pipe used for such test must have the same dimensions and composition as the pipe used in the *special permit segment*. The purpose of such test is to validate the representative regression curve and to ensure that the actual *special permit segment* pipe performs like the representative sized pipe (same composition as the pipe used within the special permit segment). Additionally, the cyclic HDB and LTHS shall be determined through testing of full size pipe (actual dimensions and composition used within

special permit segment) per ASTM D-2992 Procedure A (Long-Term Cyclic) at 140 degrees F minimum. Larger outside diameter and/or higher rated sample pipe may be tested instead, but only if all other design parameters are identical to the *special permit segment* pipe, such as fiber composition and wrap angle, pipe formulation, etc, and results shall be from samples that are representative of the actual pipe material used for this special permit.

- i. APE shall prepare written test procedures and submit them to the Director, PHMSA Western Region before commencing operation of the *special permit segment*. APE shall complete testing and provide a detailed written report of test findings to the Director, PHMSA Western Region no greater than five (5) years from the grant of this special permit.
  - ii. APE shall make available interim test results to the Director, PHMSA Western Region as they become available.
- g. Factory Pressure Testing:** APE shall have all pipe that is used in the *special permit segment* factory pressure tested to a minimum of 1.5 times MAOP for a minimum of one (1) hour. APE shall submit records demonstrating that all *special permit segment* pipe was factory pressure tested. Such records shall be traceable to all line pipe used within the *special permit segment* or purchased for subsequent pipe repairs or replacement and shall include: Pressure test reports and all pressure testing parameters (pressure, time, procedure and/or standard number, date, etc. and test acceptance parameters) and pressure testing recorders with current calibration records. APE shall also provide a certification from the pipe manufacturer that the tests were completed and that all pipe was visually checked during the pressure tests for leaks. APE shall provide all testing procedures and standards to the Director, PHMSA Western Region. APE shall submit factory pressure test records to the Director, PHMSA Western Region prior to operation of the *special permit segment*.
- h. Long-Term Integrity:** In designing the pipeline, APE shall consider and plan for all pipeline risk factors, including, but not limited to: pressure and temperature cycling; performance of multilayer composite pipe in subzero temperatures (including during excavations), during line stopping , and repairs under a range

of ambient conditions; long term performance of composite material and mechanical fittings; cathodic protection of metallic appurtenances; coating performance; fiber migration over time; long term failure prediction of line pipe; risk of inter-lamellar or inter-layer intrusion of gas and the possible effect on integrity; and methods for assessment of buried or excavated pipe.

- i. APE shall:
  - i. Schedule and perform five (5) inspections during which non-destructive and destructive testing must be performed on the pipe material after installation. Nondestructive testing shall focus on the composition and degradation of the pipe material and destructive testing shall include a hydrotest to burst pressure. At a minimum, APE shall perform inspections and tests at 1, 2.5, 5, 10, and 20 year intervals after installation.
  - ii. Remove a minimum ten (10) foot pipe segment for inspection during each inspection.
  - iii. Perform removal, replacement, and installation of pipe and fittings, and other actions related to the removal of test segments, in accordance with the requirements of this special permit.
  - iv. APE shall report the results of the inspections and tests to the Director, PHMSA Western Region within 60 days of completion of testing.

#### **5) Construction Operator Qualifications (COQ)**

- a. If the performance of a construction task associated with construction or repair of the *special permit segment* could affect the integrity of the segment, APE shall treat that task as a “covered task” notwithstanding the definition in 49 CFR § 192.801(b), and shall implement the requirements of subpart N. APE’s COQ procedures, training program and qualification tests shall include detailed information on all construction-related covered tasks.
- b. APE shall develop and implement a COQ plan. The purpose of the plan shall be to ensure construction personnel and operations personnel are trained. The COQ plan shall be followed throughout the construction phase with respect to the following: pipe offloading, pipe inspection, hauling and stringing, appurtenance inspection, field jointing methods, pipe weighting for buoyancy, installation of appurtenances,



lowering of the pipeline into the ditch, padding and backfilling, hydrostatic testing, pipe repairs made from hydrostatic testing, dewatering and purging, and inspection of work (i.e. trenching, excavating, etc.). These tasks can affect the integrity of the pipeline segment and shall be treated as “covered tasks.” The individuals driving the pipe trucks to the pipeline right-of-way would not need to be COQ qualified, unless they are responsible for the pipe unloading.

- c. APE shall also treat other tasks as covered COQ tasks. Such tasks include, but are not limited to: right-of-way stability determination, surveying, locating foreign lines, one call notifications, ditching or excavation, cathodic protection (CP) system surveys, mitigation, and installation, anomaly evaluations and repairs, right of way clean up (including installation of line markers), SCADA control point installation and verification, gas quality monitoring, launching and receiving of cleaning and inline inspection devices, and quality assurance monitoring.
- d. APE shall perform initial pipeline installation with Fiberspar personnel present.
- e. APE shall submit its COQ plan to the Director, PHMSA Western Region 30-days prior to beginning construction.

#### 6) Excavation, Pipe Cover, and Damage Prevention

- a. **Tracer Wire:** APE shall install dual insulated tracer wire on the left and right of each pipe. The tracer wire shall be appropriate for the construction and ground conditions. APE shall apply and maintain cathodic protection on each tracer wire. APE shall not wrap tracer wire around the pipe and contact between the tracer wire and the pipe shall be minimized.
- b. **Warning Tape:** APE shall install warning tape approximately two (2) feet above the pipe. The tape shall be of such quality to last for the life of the pipeline.
- c. **Minimum Pipe Bury Depth:** APE shall install the line pipe within the *special permit segment* below ground and buried to a minimum of five (5) feet from top of pipe to the surface of natural terrain.

**d. Pipe - Inspection for Damage:**

- i. APE shall inspect the pipeline during offloading at the storage yard, offloading on location, during uncoiling, placement into the ditch, backfill, and right-of-way grading and clean up.
- ii. APE shall survey the pipe location and depth of cover at 50-foot intervals.
- iii. APE shall certify and document all inspections with date, time, pipeline station, and pipe spool number.
- iv. APE shall remove and replace any pipe with the following conditions:
  1. cuts, scrapes, abrasions, or gouges that at any place exceed 50% of the outer HDPE layer thickness;
  2. discolorations of the outer HDPE layer that may indicate material degradation or inhomogeneity (based on manufacturer product recommendations);
  3. any section of pipe that appears to contain cracking or crazing (this may require laboratory testing to determine any widespread materials issue with the pipe); and
  4. other possible signs of material damage or unsoundness shall be reviewed by qualified personnel, and if the integrity of the pipeline would be less than undamaged pipe, APE shall remove and replace such pipe.
- v. APE shall document its repair and replacement procedures and standards within the comprehensive written specifications or standards required under 49 CFR § 192.303 and the O&M Manual required under § 192.605.
- vi. APE shall develop O&M procedures based upon safe operating conditions, but must hand dig for initial location of communication cables and the *special permit segment* pipeline. APE shall be required to hand or shovel dig whenever excavation operations are within two (2) feet of the *special permit segment* pipeline or any associated communications cables.

- vii. APE shall prepare and follow a damage prevention program in accordance with 49 CFR § 192.614. APE shall make this program part of its O&M Manual prior to placing the pipeline *special permit segment* in natural gas service. APE shall train its personnel on damage prevention.

## 7) Corrosion Control

- a. APE shall apply protective coatings and cathodic protection (CP) on all buried metallic pipe, components, and joints within the special permit area in accordance with 49 CFR Part 192.
- b. Test stations: APE shall install CP test stations at each metallic connector.
- c. APE shall perform external corrosion control monitoring on each buried metallic fitting in accordance with 49 CFR § 192.465(a). APE shall perform such monitoring at least once each calendar year, not exceeding 15 months. Corrosion control monitoring of the buried metallic fittings by a sampling basis is not permitted.
- d. APE shall determine the native structure-to-electrolyte potential for each buried metallic fitting prior to energizing the cathodic protection system.

## 8) Pressure and Temperature Control and Monitoring

- a. **Over-pressure Protection:** APE shall install over-pressure protection equipment necessary to keep the pipeline pressure from exceeding 1328 psig at any time.
- b. **Pressure Monitoring:** APE shall monitor operating pressures by the installation of pressure transmitters and switches in the piping system that report to the facility's SCADA system. APE shall monitor the *special permit segment* with continuous and redundant pressure transmitters and switches. APE shall also provide a means to inform operator personnel performing work on the pipeline of the pressure on the line.
- c. **Gas Temperature:** APE shall continuously monitor natural gas temperature in order that the pipeline is not exposed to temperatures exceeding 120 degrees F. APE shall inform the Director, PHMSA Western Region PHMSA any condition that leads to exposure of Fiberspar pipe to greater than 120 degrees F, as soon as practicable for review. If the Fiberspar line pipe is exposed to temperatures

exceeding 140 degrees F, the *special permit segment* pipeline shall be shut down and the Director, PHMSA Western Region shall be contacted within 24 hours of the detection for their review.

- d. Ambient temperatures:** APE shall continuously monitor ambient temperatures during line pipe installation. Construction activities involving laying or handling of pipe shall not proceed while ambient temperatures are below -10 degrees F.
- e. SCADA and Shut-In:**
  - i.** APE shall continuously monitor the *special permit segment* with a Supervisory Control and Data Acquisition (SCADA) system. Valves at wellhead and delivery *point shall have remote* monitoring and shut-in capability.
  - ii.** If communication is lost for over 3 hours, APE shall have personnel onsite to continue operations and monitoring of the *special permit segment* pipeline.
  - iii.** APE shall document SCADA operating procedures and Control Room Management procedures within the O&M Manual for the *special permit segment pipeline*.
- f. Fiber Optic Cables:** APE shall ensure fiber optic cables used for data transfer or communications, are within the right of way of the *special permit segment* and are:
  - i.** Located at least two (2) feet from the top of the pipe and to the side of the trench area.
  - ii.** Not the sole source of communications that controls valves, monitoring, or any other emergency or control device.
  - iii.** Cables run in the special permit pipeline trench shall not carry electric current, and shall not interact with the pipeline in any way.
  - iv.** APE's construction and O&M Manuals shall cover the installation and maintenance of these cables, along with addressing them with respect to excavation in both emergency and routine operations, including response to a leak, and under the condition that these cables are severed during excavation.

- v. The *special permit segment* pipeline shall be designed to go to a fail safe mode if communications are lost.

**9) Construction and Operations:**

- a. **Tools and Equipment:** APE shall have tools and fittings in stock for operational maintenance and emergency repairs (the number and types shall be detailed in O&M Manual):
  - i. An inventory of tools and materials shall be indicated in the O&M Manual for maintenance and emergency repairs.
  - ii. APE shall maintain appropriate tools and fittings to repair and replace appurtenances and piping within the special permit segment.
  - iii. APE shall maintain a supply of Fiberspar line pipe at APE's project and/or operational maintenance yards for the *special permit segment*.
- b. **Construction Specifications:** APE shall develop construction specifications for all construction phases of the *special permit segment*. These construction specifications shall be submitted to the Director, PHMSA Western Region, 30-days prior to beginning construction of the *special permit segment* pipeline.
- c. **Inspection criteria:** APE shall develop inspection criteria for construction procedures and document them within the O&M Manual. The inspection criteria shall meet the requirements of these special permit conditions and 49 CFR Part 192. These inspection criteria shall be submitted to the Director, PHMSA Western Region, 30-days prior to beginning construction of the *special permit segment* pipeline.
- d. **Repair criteria** APE shall develop pipe repair criteria and document them within the O&M Manual. Repair criteria shall be submitted to the Director, PHMSA Western Region, 30-days prior to beginning construction of the *special permit segment* pipeline.
- e. **Fracture control plan:** APE shall include a fracture control plan within the O&M Manual, which documents the expected longitudinal crack propagation behavior of the special permit pipeline, under worst case conditions. The steps taken to minimize the possibility of longitudinal crack propagation, and to minimize propagation length, shall be documented (i.e. use of crack arrestors; use

of higher toughness materials at increments; etc). In the case that crack propagation is not expected to be possible for the specific design and materials of the special permit area, this information shall be documented.

- f. Hydrostatic test:** Prior to APE putting the pipe in service, the pipe, connections, and appurtenances shall be field hydrostatically tested at 1.5 times the MAOP for a minimum of 24 hours with recording charts (pressure chart, temperature chart, dead weights and log, and calibration records of equipment, calibrated within 30 days of test), the results of which shall be presented to the Director, PHMSA Western Region for review, including determination parameters of an acceptable test. APE shall compensate for temperature and elevation variations and such compensation shall be documented on test records.
- g. Leakage detection surveys:** APE shall conduct leakage detection surveys of the entire special permit area two (2) times per calendar year at a minimum, not to exceed 7 ½ months between surveys, utilizing industry standard leak detection equipment capable of parts per million detection of gas in air (flame ionization or similar). APE shall repair all leaks as they are found, and notify the Director, PHMSA Western Region of any leaks found as soon as it is safe to do so. Leak testing procedures, equipment, and scheduling shall be documented within the O&M Manual. The first survey shall be performed within 48 hours of commencement of pipeline operations with natural gas.

#### **10) Communication and Records:**

- a. Communication and contact of personnel:** APE shall maintain a log of all material suppliers and vendors, consultants, subcontractors, APE employees, and all other parties involved in the material supply, design, construction, and O&M of this *special permit segment* with name, address, phone number, mobile phone number, e-mail, and other pertinent information, including COQ and OQ training data.
- b. Photos and Videos:** APE shall document all phases of the *special permit segment* construction with photographs and videos. APE shall include these

materials in a presentation that shall be provided to the Director, PHMSA Western Region within 90 days of *special permit segment* in-service date.

- c. Design and Material Review:** Before operating the pipeline *with natural gas*, APE shall provide the following information, to the Director, PHMSA Western Region:
- i.** Specific materials used in the Fiberspar line pipe used in the special permit segment, with *detailed schematic of* the layers, layer thickness, OD, and ID;
  - ii.** Pipe manufacturing quality assurance processes and programs – including, but not limited to, procedures, pipe and material test results, standards followed, certifications, manufacturing personnel qualifications, and any other items regarding quality assurance;
  - iii.** Design criteria – for each Class location, road crossings, and stream crossings, if applicable;
  - iv.** Calculations of maximum loads that the Fiberspar line pipe can tolerate and will be subject to in service;
  - v.** Process and calculations used to establish MAOP, consistent with this special permit and 49 CFR Part 192; and
  - vi.** Detailed comparison and correlation of the established MAOP with the HDB of the Fiberspar line pipe.
- d. Construction Start:** At least 14 days before beginning construction, APE shall notify the Director, PHMSA Western Region of the date, time, and location of pipeline installation and provide opportunity for the Director, PHMSA Western Region to witness the installation.
- e. Material Records:** APE shall provide records showing manufacturer personnel and a Quality Assurance (QA)/Quality Control (QC) inspector were onsite at all times during installation of all connections, flanges, and the laying of pipe to ensure that proper technical evaluation of installation procedures was conducted.
- f. Pipe Installation Records:** APE shall provide an installation report detailing any Construction or QA/QC issues that arose during installation that may have

compromised the integrity of the pipe and how such issues were addressed to maintain integrity, including but not limited to:

- i. Material Damage – material loss or damage that would result in repair or replacement, both internal and external;
  - ii. Pipe dents – maximum dent percentage that pipe can sustain, and repair methods;
  - iii. Bending – maximum pipe bending radius during installation; and
  - iv. Environmental Effects – temperature, moisture, freezing, soil.
- g.** APE shall not perform hydrostatic testing in accordance with Condition 9 (f) without PHMSA personnel onsite, unless approved in advance in writing by the Director, PHMSA Western Region.
- h.** If at any time APE becomes aware of a threat to the integrity of the *special permit segment* pipe that poses a risk to the public, or a failure risk, APE shall notify the Director, PHMSA Western Region immediately. Concurrent with such notification, APE shall outline the potential mitigative and integrity measures that could be used to address the threat or risk, including replacement with steel line pipe currently approved by 49 CFR Part 192.
- i.** APE shall notify the Director, PHMSA Western Region if:
- i. Repairs and modifications are required or made to the Fiberspar pipe, including fittings;
  - ii. The *special permit segment* is at any time damaged or hit; or
  - iii. The pipe or fitting manufacturer modifies or discontinues any items used in the *special permit segment*.
- j. Manuals - Design, Construction, Operating, Maintenance, and Emergency Response:** APE shall submit manuals for Design, Construction, O&M, and Emergency Response for review by the Director, PHMSA Western Region at least 30 days prior to operation of the *special permit segment* pipeline, unless otherwise indicated in writing by Director, PHMSA Western Region.
- k. Post-Construction Review with PHMSA:**
- i. APE shall conduct a post-construction special permit review with Director, PHMSA Western Region. The purpose of such review is to



review the documentation of APE's compliance with all construction-related special permit conditions and have been incorporated into their O&M Manual. APE shall contact the Director, PHMSA Western Region within 14 days before completion of construction of the pipeline. The review shall take place after construction has been completed but before operation commences, unless otherwise approved by the Director, PHMSA Western Region.

ii. APE shall complete this review prior to submitting to PHMSA the certification required in Condition 16.

- I. Annual Review with PHMSA:** APE shall conduct a one (1) year O&M review with PHMSA and annually thereafter, not to exceed 15 months. The review shall be scheduled each calendar year by APE with the Director, PHMSA Western Region after pipeline operations (in-service) begin in the *special permit segment*.

#### **11) Gas Quality:**

- a.** APE shall develop and implement a program to monitor and mitigate the presence of, deleterious gas stream constituents. Monitoring equipment must include moisture analyzer, chromatograph, and quarterly hydrogen sulfide monitoring, at a minimum.
- b.** APE shall address deleterious gas stream constituents as follows:
- i. Limit carbon dioxide to 3 percent by volume;
  - ii. Allow no free water and otherwise limit water to seven pounds per million cubic feet of gas; and
  - iii. Limit hydrogen sulfide to 1.00 grain per hundred cubic feet (16 ppm) of gas, where the hydrogen sulfide is greater than 0.5 grain per hundred cubic feet (8 ppm) of gas, the gas stream constituents shall be reviewed with the Director, PHMSA Western Region and APE shall develop a gas quality program.
  - iv. Review the program at least on a quarterly basis, based on the gas stream constituents and implement adjustments to monitor for, and mitigate the presence of, deleterious gas stream constituents.

- c. If it is determined that the commodity transported in this pipeline *special permit segment* is not compatible with, and proves detrimental to, this pipe material, PHMSA reserves the right, as a condition of this waiver, to curtail or discontinue the use of this pipe material.

**12) Material Standards:** APE shall comply with ASTM D-2517 (2000), except that it shall comply with the following two (2) paragraphs, which reflect changes made to ASTM D-2517 (2000), but which are not currently recognized in PHMSA regulations:

*4.2 Fittings—This specification covers A) reinforced epoxy resin fittings described in specification D 5685 and made of the type of materials covered in Section 5, and B) metal fittings which have been designed and tested in accordance with the provisions of The Department of Transportation Title 49 of The Code of Federal Regulations Part 192 – Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards, which are capable of being joined to the pipe and will provide a suitable gas distribution system.*

*5.1.1 This specification covers glass fiber reinforced epoxy resin pipe and fittings as defined in Specification D 2996 as Type 1; Grade 1; Classes A, C, and H; and Hydrostatic Design Basis U, W, X, Y, and Z — Example: RTRP 11 HZ – and fittings as defined in specification D 5685-RTRF 11A1D, RTRF 21A1D, RTRF 11F2D and RTRF 21A2D.*

**Note:** The Fiberspar material used for this special permit, utilizing ASTM D-2517 (2000) including the above modifications is classified as “RTRP 11 HZ”.

**13) Pipe Design:** 49 CFR § 192.121, “Design of plastic pipe,” is waived, and APE shall comply with following language for pipe within the *special permit segment*:

*Design of plastic pipe.*

*Subject to the limitations of §192.121, the design pressure for plastic pipe is determined by either of the following formulas:*

$$P = 2S \frac{t}{(D - t)} (DF)$$

$$P = \frac{2S}{(SDR - 1)} (DF)$$

*Where:*

*P = Design pressure, gauge, psig (kPa).*

*S = For thermoplastic pipe, the HDB is determined in accordance with the listed specification at a temperature equal to 73 °F (23 °C), 100 °F (38 °C), 120 °F (49 °C), or 140 °F (60 °C). In the absence of an HDB established at the specified temperature, the HDB of a higher temperature may be used in determining a design pressure rating at the specified temperature by arithmetic interpolation using the procedure in Part D.2 of PPI TR-3/2004, HDB/PDB/SDB/MRS Policies (incorporated by reference, see §192.7). For reinforced thermosetting plastic pipe, as established per ASTM D-2517 by the manufacturer, and per the conditions and limitations of this special permit, as well as technical submissions to PHMSA, not resulting in a higher MAOP than the 1328psig requested. [Note: Arithmetic interpolation is not allowed for PA-11 pipe.]*

*t = Specified wall thickness, inches (mm).*

*D = Specified outside diameter, inches (mm).*

*SDR = Standard dimension ratio, the ratio of the average specified outside diameter to the minimum specified wall thickness, corresponding to a value from a common numbering system that was derived from the American National Standards Institute preferred number series 10.*

*D F = 0.32 or*

*= 0.40 for PA-11 pipe produced after January 23, 2009 with a nominal pipe size (IPS or CTS) 4-inch or less, and a SDR of 11 or greater (i.e. thicker pipe wall).*

#### **14) Right-of-Way Management Program:**

- a. APE shall incorporate the applicable best practices of the Common Ground Alliance (CGA) into its damage prevention program within the *special permit segment*.
- b. APE shall install and maintain line-of-sight markings on the pipeline in the *special permit segment* except in agricultural areas or large water crossings such as lakes where line-of-sight signage is not practical.
- c. APE shall complete each calendar year, not to exceed 15 months, an overland terrain survey to ensure the depth of cover has not changed over the *special permit segment*. For any pipe in the *special permit segment* that does not meet the cover requirements of Condition 6 (c), APE shall restore the required depth of cover, or, if restoration is impracticable, shall implement additional safety measures in areas with reduced depth of cover. APE shall submit to the Director,

PHMSA Western Region, a description of such additional safety measures. APE shall base such measures upon the threat, such as lowering the pipeline, increased pipeline patrols and/or additional line markers.

- d. APE shall perform ground or aerial right-of-way patrols on a monthly basis, not to exceed 45 days, in the *special permit segment*. Each calendar year, not to exceed 15 months, one of these right-of-way patrols shall be a ground patrol in the *special permit segment*. APE shall document findings from all patrols and all required remediation.

**15) Annual Reporting:** Annually<sup>1</sup> following the grant of this special permit, APE shall report the following to the Director, PHMSA Western Region with copies to the Director, PHMSA Engineering and Emergency Support, and Director, PHMSA Regulations (note that requirements for annual reporting do not excuse APE from other more immediate reporting requirements of this special permit or PHMSA Regulations):

- a. The number of new residences, other structures intended for human occupancy and public gathering areas built within 220 yards of the pipeline centerline and along the *special permit segment*.
- b. Any new integrity threats identified during the previous year and the results of any excavations or other integrity assessments performed during the previous year in the *special permit segment*.
- c. Any reportable incident, any leak normally indicated on the DOT Annual Report, and all repairs on the pipeline that occurred during the previous year in the *special permit segment*.
- d. Any on-going damage prevention initiatives affecting the *special permit segment* and a discussion of the success of the initiatives.
- e. Any mergers, acquisitions, transfer of assets, or other events affecting the regulatory responsibility of the company operating the pipeline.

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<sup>1</sup> Annual reports shall be received by PHMSA by the last day of the month in which the special permit is dated. For example, the annual report for a Special Permit dated September 15, 2010, shall be received by PHMSA no later than September 30, each year beginning in 2011.

**16) Certification:** A senior executive officer, vice president or higher, of APE shall certify in writing the following:

- a. APE pipeline meets the conditions described in this special permit and 49 CFR Part 192 for the *special permit segments*,
- b. APE has maintained the following records for the *special permit segment* and included these requirements in APE's O&M Manual:
  - i. Documents (material test reports) certifying that the pipe in the *special permit segment* meets the requirements of ASTM D-2517, and all related material standards in this special permit and 49 CFR Part 192.
  - ii. Documentation of compliance with all conditions of this special permit shall be retained for the applicable life of this special permit for the referenced *special permit segment*.
- c. That all written manuals for the APE pipeline have been updated to include all additional construction, and operating and maintenance (O&M) requirements of this special permit and 49 CFR Part 192 applicable sections; and
- d. That APE has reviewed and modified its damage prevention program relative to the APE pipeline to include any additional conditions required by special permit.

APE shall send the certifications required in Condition 16 (a) through (d) with completion date, compliance documentation summary, and the required senior executive signature and date of signature to the PHMSA Associate Administrator with copies to the Director, PHMSA Western Region, Director, PHMSA Regulations, and Director, PHMSA Engineering within one (1) year of the grant date of this special permit or 60 days prior to placing the *special permit segment* into natural gas service.

**Limitations:**

PHMSA grants this special permit subject to the following limitations:

- 1) PHMSA has the sole authority to make all determinations on whether APE has complied with the specified conditions of this special permit.
- 2) Failure to submit the certifications required by Condition 16 within the time frames specified therein will result in automatic revocation of this special permit.

- 3) Should APE fail to comply with any of the specified conditions of this special permit, PHMSA may revoke this special permit and require APE to comply with the regulatory requirements in 49 CFR § 192.121.
- 4) PHMSA may revoke, suspend, or modify a special permit based on any finding listed in 49 CFR § 190.341(h)(1) and require APE to comply with the regulatory requirements in 49 CFR § 192.121.
- 5) Should PHMSA revoke, suspend, or modify a special permit based on any finding listed in 49 CFR § 190.341(h)(1), PHMSA will notify APE in writing of the proposed action and provide APE an opportunity to show cause why the action should not be taken unless PHMSA determines that taking such action is immediately necessary to avoid the risk of significant harm to persons, property or the environment (see 49 CFR § 190.341(h)(2)).
- 6) The terms and conditions of any corrective action order, compliance order, or other order applicable to a pipeline facility covered by this special permit will take precedence over the terms of this special permit in accordance with 49 CFR § 190.341(h)(4).
- 7) PHMSA grants this special permit for a period of no more than five (5) years from the grant date. If APE elects to seek renewal of this special permit, APE shall submit its renewal request at least 180 days prior to expiration of the five (5) year period to the PHMSA Associate Administrator with copies to the Director, PHMSA Western Region, Director, PHMSA Regulations, and Director, PHMSA Engineering and Emergency Support. PHMSA will consider requests for a special permit renewal for up to an additional five (5) year period. All requests for a special permit renewal shall include a summary report in accordance with the requirements in Condition 15 above and shall

- 8) Demonstrate that the special permit is still consistent with pipeline safety. PHMSA may seek additional information from APE prior to granting any request for special permit renewal.

**AUTHORITY:** 49 U.S.C. 60118(c) and 49 CFR § 1.53.

Issued in Washington, DC on OCT 8 2010.

A handwritten signature in black ink, appearing to read "J. Wiese". The signature is stylized with a large, circular flourish on the left side.

Jeffrey D. Wiese,  
Associate Administrator for Pipeline Safety