

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP  
30-Inch Crude Oil Pipeline/Cavalier to  
Sargent Ctys

Case No, PU-06-421

TESTIMONY OF LOYS A. GRAY, III

IN SUPPORT OF CLARIFICATION OF INCONSISTENCY IN ND PSC ORDER ON  
TREE CLEARING WIDTHS

LOYS A. GRAY, III, BEING FIRST DULY SWORN, ON OATH, DEPOSES AND STATES, AS FOLLOWS

- I have attached a copy of my resume with my educational background and qualifications.
- Over the past 30 years I have served in various pipeline engineering and construction management positions including engineering manager, construction manager and project director on a variety of large diameter pipeline projects throughout the United States and in foreign countries. The larger projects range from 200 to 2,500 miles in length with diameters from 30 to 40 inches.
- I am filing this testimony in support of Keystone's request for clarification of an inconsistency between North Dakota Public Service Commission (PSC) Order dated February 21, 2008 paragraph 14 and item number 8 of Tree and Shrub Mitigation Specifications.
- Paragraph 14 of the PSC Order states:

*"The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less."*
- Item number 8 of the Tree and Shrub Mitigation Specifications states:

*"The width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to 50 feet or less unless otherwise approved by the NDPSC."*
- The inconsistency is that paragraph 14 states that the width of clear cuts through extended lengths of wooded areas shall be limited to **85 feet or less** while item number 8 says the width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to **50 feet or less**.
- It is Keystone's opinion that the requirement as stated in paragraph 14 of the PSC Order was the actual intent of the Commission, and as stated in previous testimony, it is my professional opinion that it would be unsafe to construct the pipeline in less than 50 feet through forested areas particularly at road and stream crossing locations.



# L. A. "BUSTER" GRAY, P.E.

---

## Experience Summary:

Over thirty years of experience in the management and design of oil and gas pipeline projects with capital budgets from less than \$1 million to approximately \$5 billion. Experienced in all aspects of pipeline project execution including feasibility and flow studies, route selection, surveying, mapping, detailed engineering design, DOT compliance, material procurement, project and construction management, commissioning, and operations. Projects managed have included a variety of pipeline related facilities including production, separation, dehydration, compression, gas treatment and metering equipment. Owned and operated Pipeline Design Enterprises, Inc. which was merged into Universal Ensco, Inc. in 1989. Senior Vice President of Universal Ensco, Inc.

## Career highlights include:

- **Engineering & Construction Manager** of the 1,280 mile 30" & 36" U.S. portion crude oil pipeline project across North & South Dakota, Nebraska, Kansas, Missouri, Oklahoma, and Illinois. The project involves twelve (12) mainline construction spreads with installation scheduled over a two year period to begin in 2008.
- **Project Director** of the conceptual design, constructability assessment, and cost estimate for Exxon's proposed 900 kilometer 36" Sakhalin Island to China natural gas pipeline project. The pipeline route traverses the remoter area of the Khabarovsk Krai in Far Eastern Russia.
- **Project Director** for the supervision of construction of an approximate 4,000 kilometers (2,500 miles) of 40" OD gas pipeline and related facilities (China West to East Gas Pipeline Project) for PetroChina Company Limited. The pipeline route traversed rugged, mountainous areas as well as desert terrain.
- **Project Director** responsible for the preparation of a cost estimate for construction of the Guangdong LNG Pipeline Project including assessment of the proposed pipeline route for constructability issues and relative complexity to the China West to East Gas Pipeline Project.
- **Project Director** of the Conceptual Design and Cost Estimate for construction of an approximate 4,000 kilometers (2,500 miles) of 40" OD gas pipeline (China West to East Gas Pipeline Project) and related facilities for PetroChina Company Limited – Phase I.
- **Engineering & Construction Manager** of the 900-mile 36" U.S. portion of the Alliance 36" natural gas pipeline project across North Dakota, Minnesota, Iowa, and Illinois. The project involved seven (7) mainline construction spreads with installation scheduled over a two year period beginning in 1999.
- **Project Director** of the 515 mile U.S. portion of the 780-mile 24" crude oil Express Pipeline Project from Wildhorse, Montana to Casper, Wyoming. This project was routed, designed, materials procured and installed in less than one year. The project included management of route selection, survey, engineering design, drafting, procurement, and construction.

- **Engineering Manager** of the design of the 223-mile 20" Tuscarora natural gas pipeline project to serve Reno, Nevada and several small northern California communities. The project included survey, design, and drafting of the pipeline, pigging, measurement, and pressure reduction facilities. The pipeline route traverses rugged, mountainous as well as desert terrain.
- **Project Director** for the route selection, survey, permitting, right-of-way acquisition, and mapping for Tennessee Gas Pipeline Company's 223-mile, 30-inch natural gas pipeline in Louisiana and Mississippi.
- **Project Director** for Seagull Energy Corporation's Multiple Feedstocks Products Pipeline Project. This project, located in the congested Houston Ship Channel area, included the survey, mapping, detailed design, material procurement assistance, and construction inspection for three 8-inch and one 10-inch products pipelines.
- **Project Manager** of natural gas pipelines and related facilities to electric generation utilities including a 23-mile 20" line for Florida Power and Light Company in Florida, a 75-mile 20" line for Cincinnati Gas and Electric Company in eastern Kentucky, and an 11-mile 20" line for Kentucky Utilities in central Kentucky. Responsibilities included route selection, survey, permitting, design, right-of-way acquisition, and construction supervision.
- **Project Manager** for other large diameter pipeline projects including 67-miles of 30-inch and 51-miles of 24-inch natural gas pipelines in the Houston metropolitan area; 3-miles of dual 30-inch gas pipeline and measurement facilities near Hallettsville, Texas, and 11-miles of 24-inch pipeline in the highly congested Houston Ship Channel area.
- **Expert Witness** for regulatory hearings and trial on matters including pipeline flow capacities, cost estimates, construction cost claims, and design safety standards.

## Education:

Bachelor of Science, Civil Engineering, Mississippi State University, 1976

## Registrations and Professional Memberships:

- Professional Engineer, TX, No. 49686; MS, No. 9160; LA, No. 23381; AR, No. 7489; NM, No. 11337; OK, No. 15758; AL, No. 18138; CO, No. 27545; FL, No. 0044425; MT, No. 10706PE; WY, No. 6233; GA, No. 19882; SC, No. 14965; NC, No. 18638; KY, No. 17430; PA, No. PE-043436-R; MO, No. EN-025579; NV, No. 10193; NY, No. 071750; VA, No. 0402025505; MD, No. 20940; NJ, No. 38813; IL, No. 062-050390; MN, No. 24602; IA, No. 13775; KS, No. 14521; MI, No. 43431; WA, No. 34539; WI, 33582-006; OH, No. E-66360; AZ 37034; ND 4714; NE E-11956 and OR 79341PE.
- Professional Land Surveyor, Texas, No. 4257
- American Society of Civil Engineers
- Pipeliners Club of Houston (Former President)