

PUBLIC VERSION

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATION COMMISSION**

PBF Holding Company LLC and

Toledo Refining Company LLC,

Complainants

v.

Docket No. OR12-14-001

Enbridge Energy, Limited Partnership,

Respondent

PREPARED DIRECT TESTIMONY OF THOMAS O. MIESNER

on behalf of

PBF HOLDING COMPANY LLC

and

TOLEDO REFINING COMPANY LLC

February 15, 2013

THOMAS O. MIESNER

SUMMARY OF TESTIMONY

Mr. Miesner is the founder and principal of Pipeline Knowledge & Development, a firm that offers consulting services to the onshore energy pipeline industry. His testimony addresses the apportionment process used by Enbridge on its Mainline system during the period of December 2011 through July 2012.

Line 5 and Line 6 on the Enbridge Mainline system are both crude oil pipelines having the same origin and termination points although they traverse different routes and have different delivery and receipt points. Enbridge, not the shippers, determines whether crude oil nominations move on Line 5 or Line 6. During the period December 2011 through July 2012, Line 5 was apportioned each month. Although Line 6 was utilized to full capacity each month during that period, Line 6 was not apportioned.

Mr. Miesner is not able to explain why Line 5 was apportioned and Line 6 was full but not apportioned during eight consecutive months. He does not find it plausible that shipper nominations of the grades of crude oil transported on the pertinent segment of Line 6 (Line 6B) coincided exactly with the available capacity on that segment for each of the months December 2011 through July 2012. He considers it more likely that Enbridge assigned nominations between Line 5 and Line 6B in a manner which caused Line 6B to be fully utilized but not apportioned. Assigning nominations in that manner would have caused the full burden of apportionment to fall entirely on Line 5 during the pertinent period.

Acronyms

AOPL	Association of Oil Pipelines
B/D	Barrels per day
CPL	Conoco Pipe Line Company
LSB	Light Sour Blend
PBF	PBF Holding Company LLC and its subsidiary Toledo Refining Company LLC
PKD	Pipeline Knowledge and Development

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PREPARED DIRECT TESTIMONY OF THOMAS O. MEISNER

I. Introduction

Q. Please state your name, title, and business address.

A. My name is Tom Miesner. I am the founder and principal of Pipeline Knowledge & Development (“PKD”), a firm that offers consulting services to, and teaches courses for, the onshore energy pipeline industry and its myriad of stakeholders. My business address is 1303 Robert E. Lee #8, Austin, Texas 78704.

Q. What is the purpose of your testimony?

A. I am submitting this testimony on behalf of PBF Holding Company LLC and its subsidiary Toledo Refining Company LLC (collectively “PBF”) in support of their complaint against Enbridge Energy, Limited Partnership (“Enbridge Energy”) questioning the procedures, practices, and actions of Enbridge Energy in apportioning capacity on the downstream portion of its “Mainline” crude oil pipeline system.

Q. Please describe your experience in the petroleum industry.

A. I have nearly 25 years of experience managing the operations and maintenance of oil pipelines with Conoco Pipe Line Company (CPL), and an additional nine years as a private consultant to the energy pipeline industry and its myriad of stakeholders. I have also served on the executive

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committee of the Association of Oil Pipelines (AOPL) including serving as Chairman of AOPL in 2001. I authored the popular book Oil and Gas Pipelines in NonTechnical Language as well as other texts, and I developed and teach Oil and Gas Pipeline Fundamentals as well as other classes. A copy of my current curriculum vitae is attached as Exhibit No. PBF-7.

II. Nominations

Q. What is your understanding of the Enbridge nomination process?

A. My understanding is that nominations for service on the Enbridge Mainline System are made monthly. Shippers nominate by advising Enbridge of the origin point, delivery point, volume, and grade of crude oil to be shipped during the month. For crude oil to be delivered on the downstream portion of the system, shippers do not specify the specific line on which the crude oil will move, and Enbridge unilaterally assigns nominations to the various lines.

III. Enbridge Lines 5 and 6

Q. Which of the Enbridge lines are involved in this dispute?

A. My understanding is that Lines 5 and 6 are involved in this dispute, although I understand Line 14/64 could also move a significant amount of crude oil into Line 6B at the Enbridge Griffith Hartsdale facility.

Q. Briefly describe Line 5 and Line 6.

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1 A. Both Lines 5 and 6 are large diameter crude oil pipelines which originate at
2 an Enbridge Tank Farm located in Superior, Wisconsin and terminate at
3 Sarnia, Ontario. Line 5 traverses a northerly route passing to the north of
4 Lake Michigan and Line 6 traverses a southerly route, passing to the south
5 of Lake Michigan. Line 6 is divided into Line 6A which terminates at an
6 Enbridge facility in Griffith/Hartsdale, Indiana (which is also the terminus
7 of various other Enbridge crude oil pipelines including Line 62 and Line
8 14/64). Line 6B then originates at the Griffith/Hartsdale, Indiana Enbridge
9 facility. Line 6B makes deliveries to Line 17 which terminates in Toledo,
10 Ohio. Line 6B terminates in Sarnia, Ontario. In summary, Line 5 and Line
11 6 are both crude oil pipelines having the same origination and termination
12 points although they traverse different routes and have different delivery
13 and receipt points along their route.

14 Q. What grades of crude oil move on Lines 5 and 6?

15 A. Based on the Pipeline System Configuration Quarter 1, 2012, published by
16 Enbridge and attached as Exhibit No. PBF-8, my understanding is that Line
17 5 moves NGLs, Condensates, Light Synthetics, Sweet, and Light Sour,
18 including Light Sour Blend ("LSB"), and that Line 6 moves Light
19 Synthetics and Sweet from Superior to an intermediate delivery point at
20 Lockport, Illinois, and Light & High Sour (including LSB), Medium, and

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1 Heavy the distance from Superior, Wisconsin to Griffith/Hartsdale, Indiana.

2 In Discovery Response 1-9a, Enbridge includes a volume summary table
3 for Lines 5, 14, 62, 6A, and 6B which is consistent with my understanding
4 of the types of crude oil that move on Lines 5 and 6. Exhibit No. PBF-9 is
5 a recap of the movements on Lines 5 and 6B during the time period
6 December 2011 to July 2012 inclusive. Discovery Response 1-9a is
7 attached hereto as Exhibit No. PBF-10.

8 Q. How are Lines 6A and 6B different?

9 A. My understanding is that Line 6A essentially terminates at the Enbridge
10 Griffith/Hartsdale facility. Line 6B originates from this same facility.
11 Consequently these two line segments of Line 6 can be thought of as
12 essentially two different pipelines. As these two lines operate
13 independently from each other, they are apportioned separately. That is to
14 say, either, both, or neither, may be in apportionment during any given
15 month.

16 Q. Can Enbridge lines other than Line 6A supply volumes to Line 6B at the
17 Griffith/Hartsdale facility?

18 A. My understanding is that volumes from Lines 14/64 and 62 can enter Line
19 6B at the Griffith/Hartsdale Facility.

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1 Q. Does LSB move on any of these other lines into the Griffith/Hartsdale
2 facility?

3 A. The volume summary table included with Enbridge Discovery Response 1-
4 9a shows LSB moving on Line 14/64 into the Griffith/Hartsdale Facility
5 each month with a maximum movement of approximately [] cubic
6 meters per day in December 2011. *See* Exhibit No. PBF-10.

7 **IV. Apportionment on Lines 5, 6A and 6B.**

8 Q. What is the Enbridge apportionment procedure?

9 A. The pertinent apportionment procedure for the downstream portion of the
10 Enbridge Mainline System is set forth in Rule 14 of the Rules and
11 Regulations tariff for Enbridge contained in FERC Tariff No. 41.1.0. If
12 more crude oil is tendered than can be transported, Rule 14 provides that
13 Enbridge shall apportion such tenders “on a pro rata basis” among all
14 shippers “on the basis of such current tenders and the current operating
15 conditions of the facilities of [Enbridge].” Rule 14 is silent on the effect of
16 any apportionment on individual lines. A copy of FERC Tariff No. 41.1.0
17 is attached to the testimony of Robert Foti as Exhibit No. PBF-2.

18 Q. Were Lines 5, 6A, or 6B apportioned during the time period December
19 2011 to July 2012?

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1 A. Line 5 was apportioned each month of this time period, but neither Line 6A
2 nor Line 6B was apportioned during any month of that time period as
3 shown in Exhibit No. PBF-4 attached to the testimony of Robert Foti.

4 Q. Did LSB move on Line 6B during any month from December 2011 to July
5 2012 inclusive?

6 A. As shown on the table included with Enbridge Response 1-9a, Enbridge
7 moved [] of LSB on Line 6B during January 2012 and [] of
8 LSB on Line 6B during July of 2012. *See* Exhibit No. PBF-10.

9 Q. Why wasn't LSB moved on Line 6B during other months if Line 6B was
10 not being apportioned?

11 A. My understanding from the testimony of Robert Foti is that Enbridge
12 advised PBF that it assigned nominations of LSB crude oil only to Line 5
13 when Line 6 was filled to capacity with heavy crude oil nominations.

14 Q. In general in the oil pipeline industry, what is the difference between a line
15 being "full" and a line being apportioned?

16 A. In my experience, when a pipeline company says a line is "full" they mean
17 the line is running at maximum capacity. That is, no more crude oil can
18 physically be moved on the line. Pipeline companies enter apportionment
19 of a line or system when that line or system has been over nominated. That

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1 is, shippers have expressed a desire for the pipeline company to move more
2 crude oil on the pipeline system than can physically be accommodated.

3 Q. Can you explain why Line 6B was full but not apportioned for eight
4 consecutive months?

5 A. No. Shippers do not nominate to individual lines, and Enbridge unilaterally
6 determines which crude oils move on which lines. Accordingly, it is
7 difficult to understand why one line would be apportioned and the others
8 not. During January and July 2012 some LSB was moved on Line 6B. It is
9 not plausible, however, that shipper nominations of the grades of heavy
10 crude oil transported on Line 6B coincided exactly with the available
11 capacity on Line 6B (less the LSB moved on Line 6B in January and July)
12 for each of the months December 2011 through July 2012. It is more likely
13 that Enbridge assigned nominations between Line 6B and Line 5 in a
14 manner which caused Line 6B to be fully utilized but not apportioned,
15 including moving some LSB on Line 6B when space allowed. Of course,
16 assigning nominations in the manner described would have caused the full
17 burden of apportionment between Superior and Sarnia to fall entirely on
18 Line 5 during this time period.

19 Q. Does that conclude your testimony?

20 A. Yes.

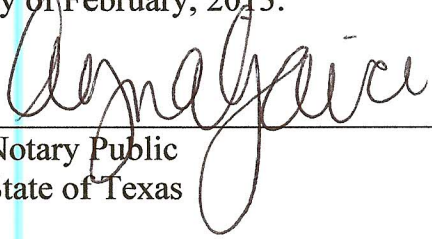
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VERIFICATION

State of Texas
County of Harris

Before me on this day personally appeared Thomas O. Miesner, known to me as the person described in the foregoing prepared direct testimony and stated to me that the facts contained in such prepared testimony are true and correct to the best of his knowledge and belief.

Given my hand and seal this 13 day of February, 2013.


Notary Public
State of Texas

My Commission expires: 11/27/15

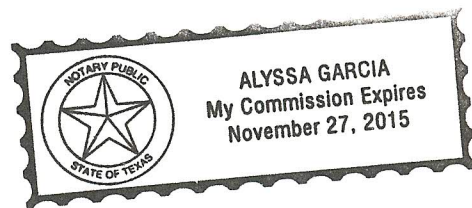


Exhibit No. PBF-7

THOMAS O. MIESNER

Pipeline Knowledge & Development

Principal

Mr. Miesner has extensive experience in all aspects of the pipeline industry including positions as President and Vice President of Conoco Pipe Line Company and three years as Chairman of Explorer Pipe Line Company. Tom has also served as Chairman of both the Audit Committee and the Compensation Committee of Explorer Pipe Line Company. He has served on the Board of Directors of Conoco Pipe Line Company, Continental Pipe Line Company, Conoco Offshore Pipe Line Company, Yellowstone Pipe Line Company, Pioneer Pipe Line Company, and Sentinel Transportation Company. Tom's service to the industry also includes prior Chairmanship of the Association of Oil Pipelines. His 30+ years of experience and proven ability to manage conflict, think creatively, and develop strategies provide valuable negotiating power to pipeline clients facing difficult legal, regulatory and financial situations. In addition to co-authoring two texts on energy and pipelines, Tom teaches Oil and Gas Fundamental, a two day class. Tom founded Pipeline Knowledge & Development which consults to the pipeline industry in the following areas:

- ◆ Pipeline Management and Organizational Consulting and Operations Training.
- ◆ Market Research and Value Propositions
- ◆ Strategy Formulation and Implementation
- ◆ Business Development
- ◆ Short Course Development and Instruction
- ◆ Litigation Consulting and Expert Testimony
- ◆ Economic and Financial Matters

In addition to managing Pipeline Knowledge & Development, Tom is also Chairman of the Board of LineStar Services Company, an energy pipeline service company, and serves on the Editorial Board of the Oil and Gas Journal.

Relevant Experience

Key Accomplishments

- ◆ Federal Pipeline Safety Legislation passed while Chairman of Association of Oil Pipelines
- ◆ Championed the development and implementation of Operations Excellence System for Conoco Pipe Line Company
- ◆ Oversaw the complete replacement of SCADA and leak detection system without incident for Conoco Pipe Line Company
- ◆ Increased income by 32% over three years [\$38MM (1998) to \$50MM (2001)] while Chairman of Explorer Pipe Line Company
- ◆ Doubled After Tax Operating Income over four years as Strategy Manager of Rocky Mountain Business Unit for Conoco, Inc.
- ◆ Obtained 9% average tariff rate increase via Federal Energy Regulatory Commission Cost of Service filing while President of Conoco Pipe Line Company/

- ◆ Negotiated a number of pipeline related asset sales, purchase, and joint venture agreements as Manager of Business Development and Joint Ventures for Conoco Pipe Line Company.

Professional Experience

<i>Pipeline Knowledge & Development (2004-Present)</i>	<i>Principal</i> Provides pipeline management consulting and market research, teaches Oil and Gas Pipeline Fundamentals and other pipeline related topics, provides litigation consulting and expert services for pipeline and terminal litigation cases, offers due diligence consulting for pipeline, terminal and related acquisitions, assists clients in negotiating pipeline related business arrangements and agreements, and provides strategy and business consulting for various energy clients
<i>Conoco, Inc. (2003)</i>	<i>Expert on Special Assignment</i> Advised, managed and administered the disposal of the Salt Lake and Denver Business Units in compliance with FTC Consent Order while meeting all FTC requirements on a limited timetable. Received special commendation for performance from Jim Nokes, President of Refining, Marketing, and Transportation
<i>ConocoPhillips (2002)</i>	<i>Expert on Special Assignment</i> Lead the design of the new Pipeline and Terminal organization and adopted the best practices and work processes of both companies while producing \$15MM in synergies
<i>Conoco Pipe Line Company (1995-2001)</i>	<i>President of Company and Manager of Transportation Services which included truck and rail.</i> Reduced operations costs to the lowest quartile versus industry competitors. Conceived and successfully convinced executive management to fund development and implementation of a complete "management process" which significantly improved reliability and insured asset integrity. Achieved a 9% rate increase for the entire Conoco Pipeline Company systems via presentations to and meetings with Federal Energy Regulatory Commissioners. Using the Federal Energy Regulatory Commission's settlement process, settled protests against Conoco Pipeline Company's rate increases. Oversaw a complete control system (SCADA) and leak detection overhaul and upgrade with high reliability and no incidents
<i>Conoco Pipe Line Company (1993-1995)</i>	<i>Rocky Mountain Business Unit Strategy Manager</i> Lead Strategy Development resulting in more than doubling After Tax Operating Income. Served on Business Unit Leadership Team
<i>Conoco Pipe Line Company (1985 -1992)</i>	<i>Manager of Business Development and Joint Ventures</i> Oversaw management of Conoco Pipe Line Company's joint ventures and the pipeline merger and acquisition process including leading the agreement development and negotiation process
<i>Conoco Pipe Line Company (1979-1985)</i>	Held various operations and engineering positions of increasing responsibility

Management Consulting and Market Research

- ◆ Preparation of a detailed report regarding Developing, Designing, Engineering, Constructing and Operating Large Diameter Crude Oil Transmission Pipelines
- ◆ Consulting with a pipeline operating company regarding reorganizational redesign to achieve improved efficiencies.
- ◆ Consulting with a major pipeline operating company in the Middle East regarding organizational design, training, preparation of operating and procedure manuals and operational readiness in connection with arbitration.
- ◆ Consulting with a pipeline services company regarding offerings, strategies, and staffing levels.
- ◆ Preparation of a detailed staffing plan for a large multinational pipeline.
- ◆ Preparation of a preliminary routing and feasibility studies for pipelines in the Middle East and Africa.
- ◆ Analysis of the pipeline repair market for a venture seeking to deploy their technology into the pipeline repair market.
- ◆ Marketing and placement consulting for a firm seeking to deploy their existing fiber optic technology into the pipeline corrosion and seismic monitoring market.

Recent Classes and Presentations

- ◆ **Oil Pipeline Control Room Operator Training (February 2013).** Customized offering for a pipeline operating company – presented twice.
- ◆ **Oil and Gas Pipelines for the NonTechnical Professionals (February 2013).** PKD sponsored public class
- ◆ **Oil Pipeline Control Room Operator Training (February 2013).** PKD sponsored public class
- ◆ **Oil and Gas Pipeline Fundamentals (January 2013).** PKD sponsored public class
- ◆ **Oil and Gas Pipeline Facilities and Design - a sub course of an Onshore Pipeline Engineering Class (November 2012)** Clarion Technical Conferences
- ◆ **Oil Pipeline Control Room Operator Training (November 2012).** PKD sponsored public class
- ◆ **Oil and Gas Pipelines for the NonTechnical Professionals (October 2012).** PKD sponsored public class
- ◆ **Oil and Gas Pipelines for the New Pipeline Employee (September 2012).** Pipeline operating company
- ◆ **Oil and Gas Pipeline Fundamentals (September 2012).** PKD sponsored public class
- ◆ **Customized Pipeline Course (August 2012).** IT consulting company.
- ◆ **Oil Pipeline Fundamentals (July 2012).** Pipeline operating company

- ◆ **Oil and Gas Pipeline Fundamentals (June 2012).** Pipeline engineering and design consulting company.
- ◆ **Oil and Gas Pipeline Fundamentals (May 2012).** PKD sponsored public class
- ◆ **Pipeline Equipment and Controls – a sub course of an Onshore Pipeline Engineering Class (April 2012).** Clarion Technical Conferences
- ◆ **Customized Pipeline Workshop (March 2012).** Delegation of executives from Sinopec.
- ◆ **Oil Pipeline Fundamentals (February 2012).** Pipeline operating company
- ◆ **Oil and Gas Pipeline Fundamentals (January 2012).** PKD sponsored class
- ◆ **Oil and Gas Pipelines for Supply Chain and Procurement Professionals (January 2012).** Pipeline operating company.
- ◆ **Oil and Gas Pipeline Fundamentals (November 2011).** Pipeline supplier.
- ◆ **Oil and Gas Pipeline Fundamentals (October 2011).** API University.
- ◆ **Liquid Pipeline Controller customized course (September 2011).** Pipeline operating company
- ◆ **Oil and Gas Pipeline Fundamentals (August 2011).** PKD sponsored class
- ◆ **Oil Pipeline Fundamentals (August 2011).** Pipeline operating company
- ◆ **Customized Pipeline Workshop (July 2011).** Delegation of executives from Pertamina Pipeline
- ◆ **Oil and Gas Pipeline Fundamentals (June 2011).** API University.
- ◆ **Oil and Gas Pipeline Fundamentals (March 2011).** API University.
- ◆ **Oil Pipeline Fundamentals (April 2011).** Pipeline owned by integrated major.
- ◆ **Oil Pipeline Fundamentals (February 2011).** Pipeline owned by integrated major.
- ◆ **Introduction to Oil Pipelines (November 2010).** Pipeline chemicals supplier.
- ◆ **Oil and Gas Pipeline for Support Professionals (October 2010).** Pipeline contracting company.
- ◆ **Oil and Gas Pipeline Fundamentals (July 2010).** API University.
- ◆ **Introduction to the Oil and Gas Pipeline Business (June 2010).** Private class for pipeline SCADA vendor.
- ◆ **Introduction to the Oil and Gas Pipeline Business (July 2010).** Private class for pipeline SCADA vendor.

- ◆ **Oil and Gas Pipeline Fundamentals (May 2010).** Private class for industry trade association.
- ◆ **Pipeline Equipment and Controls – a sub course of an Onshore Pipeline Engineering Class (May 2010).** Clarion Technical Conferences.
- ◆ **The Oil and Gas Business for Executives (April 2010).** Private class for pipeline SCADA vendor.

Testimony and Litigation Consulting

- ◆ Performed litigation consulting for a shipper in a case at the FERC relative to pipeline apportionment procedures and practices.
- ◆ Performed litigation consulting relative to rights of way and construction related damages in Pennsylvania.
- ◆ Performed litigation consulting, expert analysis, and expert testimony for a natural gas pipeline operating company regarding scada and controls in connection with a natural gas pipeline release and explosion.
- ◆ Performed litigation consulting for a pipeline operating company relative to ROW marking and excavation issues in connection with outside force damage of a refined products pipeline.
- ◆ Performed litigation consulting for a pipeline firm bringing suit for pollution cleanup against another pipeline firm in connection with a refined product release.
- ◆ Performed expert analysis of claims for an insurance company relative to engineering and construction related settlement.
- ◆ Provided litigation consulting to shipper regarding cost control and cost allocation of a leased pipeline system transporting chemical feedstocks.
- ◆ Filed Expert Testimony, provided consultation, submitted Expert Report, and Testified in an arbitration dispute relating to provisions within an Operating Agreement for a crude oil pipeline in Turkey.
- ◆ Provided litigation consulting to chemicals plant relative to delivery of excess liquids by a natural gas pipeline company.
- ◆ Consulted Shipper in relation to tariff rules and regulations for a California crude oil pipeline.
- ◆ Submitted Expert Report and provided consulting services to plaintiff attorney in securities litigation regarding the economic impact of a crude oil release in Alaska – Case 2.
- ◆ Provided consultation to reports submitted by Experts on behalf of a natural gas pipeline company in litigation regarding California natural gas pipeline capacity and market manipulation.
- ◆ Advised and consulted a refined products pipeline company during litigious proceedings at the Federal Energy Regulatory Commission regarding various refined products pipeline capacity allocation issues for a Texas pipeline.
- ◆ Prepared Expert Report and provided consultation to plaintiff attorney during securities litigation regarding the economic impact of a crude oil release in Alaska – Case 1.

- ◆ Provided litigation consulting to plaintiff attorney in regards to issues of valuation associated with the buyout of a pipeline Master Limited Partnership.
- ◆ Advised and consulted Shippers on litigious dispute regarding proper accounting methods for crude oil inventory methods for a pipeline extending from the U.S Gulf Coast to the Midcontinent.
- ◆ Provided consultation to a pipeline company for litigation in regard to the acquisition of an Illinois crude oil pipeline right of way.
- ◆ Consulted plaintiff attorney relating to the punitive damages associated with a refined products pipeline release in Kansas.
- ◆ Provided advice and consultation to developer during pre-litigation phases of a dispute relating to the location of a natural gas pipeline in Missouri.
- ◆ Prepared Expert Report, was deposed, and filed Direct Testimony for a Shipper during arbitration relating to the interpretation of an Operating Agreement and remuneration to the Operator under that Agreement for a pipeline located in Louisiana.
- ◆ Advised and consulted the U.S. Department of Justice during litigation in relation to a crude oil release on the Heinz National Wildlife Refuge in Pennsylvania.
- ◆ Submitted Expert Report and consulted for plaintiff attorney in litigation regarding Olympic Pipeline Business Interruption Insurance.
- ◆ Prepared Expert Report and provided consulting services to defense attorney for litigation relating to the Olympic Pipeline bankruptcy.

Major Publications

Print and Electronic

- ◆ Chapter 26, *Oil and Gas Pipeline Engineering, Handbook of Transportation Engineering*, second edition, New York, McGraw Hill 2011.
- ◆ *Oil and Gas Pipelines in Nontechnical Language*. Tulsa: Pennwell Publishing, 2006.
- ◆ *The Role of U.S. Energy Pipelines and Pipeline Research*. The Steering Committee on Energy Pipelines and Research. 2006.
- ◆ *A Practical Guide to U.S. Natural Gas Transmission Pipeline Economics*. Oil and Gas Research Center, 2009.
- ◆ *The Interstate Natural Gas Transmission System: Scale, Physical Complexity, and Business Model*. Washington D.C.: Interstate Natural Gas Association of America, 2010.
- ◆ *The Final Miles, Natural Gas Distribution Pipeline Fundamentals*. Tulsa: Pennwell Publishing, to be released 2012.
- ◆ Numerous articles for trade publications

Education

<i>University of Missouri - Rolla (1975)</i>	B.S. Engineering Management, <i>Cum Laude</i> .
<i>Conoco Pipe Line Company</i>	Numerous Short Courses and Company Sponsored Training.
<i>Rice University</i>	Operations Management Consulting Certification.
<i>Northwestern University - Transportation Institute</i>	Served as faculty member.

Industry and Community Associations

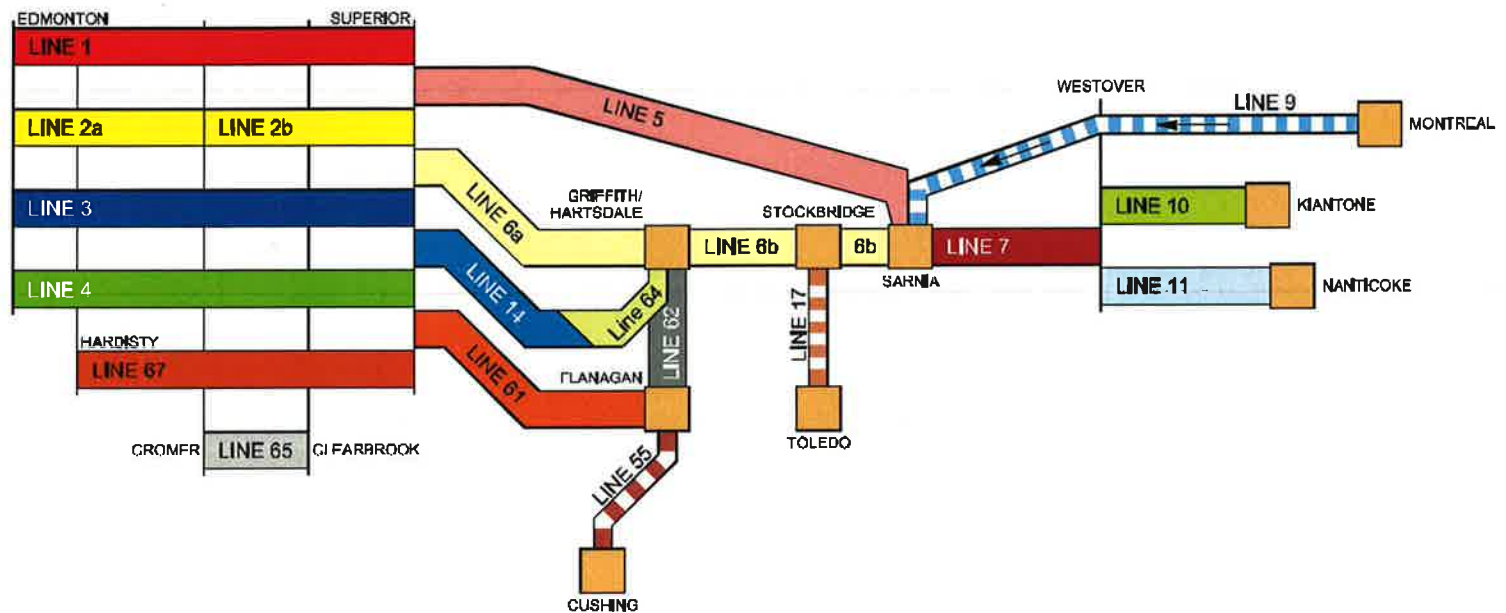
- ◆ Chairman of the Board, Line Star Services Company (2010 to present)
- ◆ Board Member, Fiber Optic Systems Technology (2005 – 2006)
- ◆ Chairman, Association of Oil Pipelines (2001)
- ◆ Chairman, Pipeline Industry Strategic Initiatives Steering Team
- ◆ Chairman, Gas/Liquids Steering Team
- ◆ Executive Sponsor for Rate True Up Task Force, Association of Oil Pipelines
- ◆ Executive Committee Member, Association of Oil Pipelines
- ◆ Sponsor to Office of Public Safety Mapping Task Force, American Petroleum Institute
- ◆ General Committee on Pipelines Member, American Petroleum Institute
- ◆ Pension Advisory Committee Member, Association of Oil Pipelines
- ◆ Chairman, Federal Affairs Committee, Association of Oil Pipelines

Exhibit No. PBF-8



Pipeline System Configuration

Quarter 1, 2012



Line 1

37,600 m³/d (236.5 kbpd)
18"/20" - 1098 miles
NGL
Refined Products
Light Synthetics

Line 2

Line 2a
70,300 m³/d (442.2 kbpd)
24" - 598 miles
Line 2b
70,300 m³/d (442.2 kbpd)
24"/26" - 502 miles
Condensates
Light Synthetics
Sweet
Light & High Sour

Line 3

62,000 m³/d (390.0 kbpd)
34" - 1098 miles
Condensates (Edmonton to Hardisty)
Light Synthetics
Sweet
Light & High Sour

Line 4

126,500 m³/d (795.7 kbpd)
36"/48" - 1098 miles
Heavy
Medium (Ex-Clearbrook)
Light Sour (Ex-Clearbrook)

Line 5

78,100 m³/d (491.2 kbpd)
30" - 845 miles
NGL
Condensates
Light Synthetics
Sweet
Light Sour

Line 6

Line 6a
96,800 m³/d (608.8 kbpd)¹
34" - 467 miles
Line 6b
36,800 m³/d (231.4 kbpd)²
30" - 293 miles
Light Synthetics (Superior to Lockport)
Sweet (Superior to Lockport)
Light & High Sour
Medium
Heavy

Line 7

23,900 m³/d (150.3 kbpd)
20" - 153 miles
Condensates
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy

Line 65

29,500 m³/d (185.6 kbpd)
20" - 313 miles
Light Sour
Medium

Line 10

11,800 m³/d (74.2 kbpd)
12"/20" - 91 miles
Condensates
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy

Line 11

18,600 m³/d (117.0 kbpd)
16"/20" - 47 miles
Condensates
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy

Line 62

20,700 m³/d (130.2 kbpd)
22" - 75 miles
Heavy

L 14 L 64

50,500 m³/d (317.6 kbpd)
24" - 467 miles
Condensates
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy (Superior to Mokena)

Line 61

63,600 m³/d (400.0 kbpd)
42" - 454 miles
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy

Line 67

71,500 m³/d (449.7 kbpd)
36" - 999 miles
Heavy

Not Part of the Enbridge Mainline System

Line 9

38,200 m³/d (240.3 kbpd)
30" - 524 miles
Condensates
Sweet
Light & High Sour

Line 17

16,000 m³/d (100.6 kbpd)
16" - 88 miles
Heavy

Line 55

30,700 m³/d (193.3 kbpd)
22"/24" - 575 miles
Light Synthetics
Sweet
Light & High Sour
Medium
Heavy

NOTES:

Capacities provided are Annual Capacities

- ¹Current pressure restrictions limit the capacity to 96,800 m³/d (608.8 kbpd). Annual capacity with pressure restrictions removed is 106,000 m³/d (666.7 kbpd).
- ²Current pressure restrictions limit the capacity to 36,800 m³/d (231.4 kbpd). Annual capacity with pressure restrictions removed is 45,000 m³/d (283.0 kbpd).
- Updated: January 2012

File: 2012_Q1 System Config.dwg

Revised by: YZ
Drawn by: DRD

Exhibit No. PBF-9

Page 1 of 1 Page redacted

Exhibit No. PBF-10

Page 1 of 1 Page redacted