December 14, 2021

Ms. Lisa Felice  
Michigan Public Service Commission  
7109 W. Saginaw Hwy.  
P. O. Box 30221  
Lansing, MI 48909

RE: MPSC Case No. U-20763

Dear Ms. Felice:

The following are attached for paperless electronic filing:

- Rebuttal Testimony of Richard B. Kuprewicz on behalf of Bay Mills Indian Community.
- Exhibit BMC-37 (RBK-1)
- Proof of Service

Sincerely,

Christopher R. Clark  
ceark@earthjustice.org
TESTIMONY OF RICHARD B. KUPREWICZ

ON BEHALF OF

BAY MILLS INDIAN COMMUNITY

December 14, 2021
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I. INTRODUCTION AND QUALIFICATIONS

Q. Please state for the record your name, job title, and business address.

A. My name is Richard B. Kuprewicz. I am the president of Accufacts Inc., headquartered at 8151 164th Ave NE, Redmond, Washington 98052.

Q. On whose behalf is this rebuttal testimony being offered?

A. I am testifying on behalf of Bay Mills Indian Community (BMIC). This testimony contains my independent opinions.

Q. Please summarize your educational background and professional experience.

A. I am a chemical engineer with nearly fifty years of experience in the oil and gas industry. My professional work has focused on the refining and production of hydrocarbons and the transportation of hydrocarbons via pipelines. I have extensive experience in emergency response and pipeline incident command.

I completed my undergraduate studies in 1973 at the University of California, Davis and hold a Bachelor of Science degree in both Chemistry and Chemical Engineering.

In my current position as President of Accufacts Inc., I specialize in liquid and gas pipeline investigation, auditing, risk management, siting, construction, design, operation, maintenance, training, Supervisory Control and Data Acquisition (SCADA) systems, leak detection, management review, emergency response, pipeline safety management, and regulatory development and compliance. As President for the past twenty-two years, I have...
consulted for local, state, and federal agencies, non-governmental organizations, the public, and pipeline industry members on pipeline regulation, siting, operation, maintenance, and design. Most of my consulting work has related to pipeline operation in unusually sensitive areas of high population density or environmental sensitivity. Prior to my consulting work with Accufacts Inc., I worked in the private sector on gas and oil pipeline projects.

I have also served on numerous state and federal committees concerning pipeline safety. By appointment of the Secretary of Transportation, I served for over fifteen years as a member of the federal Technical Hazardous Liquid Pipeline Safety Standards Committee, a technical committee established by Congress to advise the Pipeline and Hazardous Materials Safety Administration (“PHMSA”) on pipeline safety regulations. By appointment of the governors of Washington, I also served seven years on the Washington State Citizens Committee on Pipeline Safety to advise the government on regulatory matters related to pipeline safety, routing, construction, operation, and maintenance. My educational background and non-confidential professional experience are set forth in more detail in my curriculum vitae, provided as Exhibit BMC 37 (RBK-1).

19 Q. Have you previously testified before this Commission?
20 A. No.

22 Q. Have you provided expert testimony in other matters?
23 A. Yes. The following are recent non-confidential examples:


3. Provided expert testimony on behalf of Save Our Illinois Soil and the Sierra Club to the State of Illinois Commerce Commission related to the Dakota Access Pipeline and Energy Transfer Crude Oil Company, LLC Optimization Project to expand pipeline throughput to 1,100,100 bpd (Docket No. 19-0673), on March 5, 2020.

5. Provided expert testimony on behalf of the Standing Rock Sioux Tribe to the State of North Dakota Public Service Commission related to the Dakota Access Pipeline, LLC, and Dakota Access Pipeline Optimization Emmons County plan to expand pipeline throughput to 1,100,100 bpd (Case No. PU-14-842), on November 13, 2019.

6. Assisted the Commonwealth of Massachusetts, Office of the Attorney General in developing pipeline safety processes to be incorporated into the settlement agreement related to Columbia Gas’ sale of Assets to Eversource following the Merrimack Valley, Massachusetts overpressure event and tragedy of September 13, 2018.


9. Provided redacted direct testimony on behalf of the District of Columbia Government, before the Public Service Commission of the District of Columbia, in
the matter of the merger of AltaGas Ltd. and WGL Holdings, Inc., Formal Case No. 1142, September 29, 2017.


Q. What is the purpose of your testimony in this matter?

A. I am providing the following expert opinions on behalf of BMIC to rebut: 1) the Staff and MSCA testimony that inappropriately minimizes the inherent risks associated with the Tunnel Project; and 2) that the Staff and MSCA testimony fails to identify reasonable mitigation measures to abate the risks posed by the Dual Pipelines while it continues to operate in the Straits.

Q. What information did you review in preparing your testimony in this case?

A. In preparing my testimony in this case, I reviewed the testimony of and exhibits sponsored by the following witnesses:

On Behalf of the Staff:

1. September 14, 2021 Testimony of David Chislea
2. September 14, 2021 Testimony of Daniel N. Adams
3. September 14, 2021 Testimony of Philip Martin Ponebshek
4. September 14, 2021 Qualification and Direct Testimony of Travis Warner
On Behalf of the Mackinac Straits Corridor Authority:

1. September 14, 2021 Direct Testimony of Daniel M. Cooper

In evaluating the above listed testimony I also reviewed the Joint Permit Application.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibit:

Exhibit BMC-37 (RBK-1): Curriculum Vitae of Richard B. Kuprewicz

II. THE STAFF TESTIMONY INAPPROPRIATELY MINIMIZES THE INHERENT RISKS ASSOCIATED WITH THE TUNNEL PROJECT.

Q. MPSC Staff Witness Travis Warner summarized the Alternatives Analysis by testifying that “the risks associated with the potential for a release of Line 5 products to enter the waters of the Great Lakes from a Straits tunnel crossing of a design, as proposed, is considered to be negligible, and un-quantifiably low.” (Warner Testimony at 22:12-16). Do you agree with the statement that the potential for a release of Line 5 products from the tunnel into the Great Lakes is “negligible and un-quantifiably low?”

A. No.

Q. Please explain why you disagree with Mr. Warner’s testimony.

A. From an engineering standpoint, there is a potential for a release into the Straits from the tunnel by way of a catastrophic explosion. While a risk of release in this manner may be considered low, it is not negligible and, in my opinion, should not be downplayed in such
a way by the Staff. A “low risk” does not equate to “no risk” or even a “negligible risk” when transporting crude oil, and especially propane.

4 Q. Please elaborate on your disagreement with Mr. Warner’s testimony and explain why the risk of explosion due to transporting crude oil or propane in a pipeline through an underground tunnel does not negate a risk of release into the Straits.

A. Mr. Warner set forth the reasoning that the replacement of the Dual Pipelines within a tunnel beneath the Straits would not only negate the threat of an anchor strike, but also “serve as a secondary containment vessel in the event of a spill.” (Warner testimony at 22:11-12). This testimony fails to recognize that both propane and crude oil are highly hazardous and volatile substances and there is always a risk of explosion when handling these substances. When transporting these substances through a pipeline enclosed in a tunnel, the risk of an explosion is enhanced which in turn enhances the probability that the secondary containment vessel will fail.

In fact, Mr. Warner represents that the Tunnel Alternative Report (Exhibit A-9, page 6) puts the probability of a release of product from the tunnel at “virtually zero,” going so far as to state that “there is no credible scenario that would result in a release of product from the tunnel into the Straits.” (Warner testimony at 28:14-16). In my opinion, this is a false statement that minimizes the risk of an explosion which cannot be said to be “virtually zero.” An explosion within the tunnel could feasibly be caused by a hydrocarbon release from the pipeline that generates a heavier than air vapor release. In this scenario, the vapor release would quickly settle in low spots given the tunnel elevation profile. Then all that is
required to create an explosion is an electrical spark within the air/fuel cloud. An ignition
can be caused either by the equipment maintained within the tunnel (e.g. the sump pump),
or brought in with a worker, or even by static electricity—to create an explosion.
Although the tunnel’s design includes a ventilation system (see Exhibit A-11)—and that
system is important to have—it is not infallible and cannot completely eliminate risk,
especially given the large diameter of the tunnel which hinders the ability for the ventilation
system to sweep released vapor from the tunnel. One intended purpose of the ventilation
system is to sweep any released fuel vapor out of the tunnel or reduce the amount of
released fuel vapor so that it is out of the flammability range, such that it will not ignite
and detonate. But in evaluating the proposed system and summarizing their key findings
to the Commission, the testimonies of Mr. David Chislea, Mr. Daniel Adams, Mr. Philip
Martin Ponebsnek, and Mr. Warner omit the difficulty in controlling the fuel air mixture
within the tunnel, which increases the possibility of multiple detonations/explosions within
the tunnel. The ventilation system alone may help, but will not prevent, an explosion from
occurring following the accumulation, or pocketing, of vapor in the tunnel.

It is my understanding that all electrical equipment installed in the tunnel will comply with
Class 1, Division 2 specifications. This fact does not alter my opinion that the MPSC staff’s
witnesses inappropriately minimize the risks presented by the tunnel.¹ Such an electrical
classification relies on adequate ventilation which will not be operated as a day-to-day
practice and thereby ignores the additional risk of a crude oil or propane pipeline release
within the unique confines of the tunnel. The more stringent Class 1 Division 1

specifications intended to avoid the source of an electrical ignition would be a more appropriate measure. However, even this higher rating will not completely prevent an explosion from other ignition sources within the confines of the tunnel in the event of a pipeline release within the unique location.

It is important to note that crude oil, and especially propane, in a confined space can generate a tremendous amount of pressure, especially upon detonation. Propane has a broad flammability range coupled with a lower autoignition temperature which makes this material easier to detonate or explode. In this way, propane differs from water or other materials that are typically transported through pipelines. In fact, based on the volatility of propane, the Tunnel Project is atypical, and I am not personally aware of other similar projects. A release in this unique environment carries the risk of both loss of human life and the release of crude oil and propane into the Great Lakes as an explosion in such a confined structure will most likely violate the tunnel’s secondary containment intent.

None of the Staff witnesses—Mr. Chislea, Mr. Adams, Mr. Ponebsnek, nor Mr. Warner—have provided a sound scientifically-based reason to support the Staffs’ conclusion that the Tunnel Project will prevent a release such that the risk can be said to be “negligible.” Indeed, any release that does occur, either by an explosion within the tunnel or a release from the tie-in pipeline on either side, has the potential to be catastrophic. An explosion within the tunnel could cause a high-pressure event usually, but not always, followed by multiple fires and explosions, such as the 36-hour long fire that was the result of a vapor
cloud that was ignited in 1999.² Blast forces of this magnitude have the potential of shattering concrete, especially segment concrete linings. In short, an explosion would cause a high-pressure event that would put the concrete structures at risk. This in turn runs the risk of releasing material into the Straits.

In short, there is no absolute when dealing with crude oil or propane in a tunnel. A low risk does not equate to no risk. Crucially, an engineer needs to design a pipeline as if a release will occur and the Commission should evaluate the proposal in the same way.

Q. In their analysis of the Tunnel Project, and, specifically, when Mr. Warner concluded that the risk of a release would be “negligible,” did the witnesses presented by the MPSC Staff correctly consider the capacity of the proposed pipeline segment that would run through the tunnel.

A. No. Mr. Warner stated that the Replacement Project will not impact the average annual capacity of Line 5. (Warner testimony at 8:14). Mr. Daniel Cooper likewise testified that replacement of the two existing 20-inch lines with one 30-inch line will have “very little influence on the overall transportation capacity of Line 5.” (Cooper testimony at 13). But the Tunnel Project creates an opportunity to increase the volume, and thereby the capacity, of Line 5. Enbridge has publicly stated that the existing 20-inch pipelines crossing the Straits of Mackinac operate at a maximum operating pressure (“MOP”) of 600 psig or “25 percent of its maximum pressure capacity” for the specific submerged pipe segments. By way of comparison, the new 30-inch pipeline segment spanning the tunnel will have a MOP

rating of 1440 psig. This allows the pipeline operator to increase the capacity on Line 5 without raising the MOP on the remainder of the onshore Line 5 pipeline segments. The MPSC Staff’s witnesses do not appear to have taken this into account.

Q. Exhibit S-16, Table 2, suggests that it would take 50 hours for the tunnel to fill with fluids released from the pipeline, and that only after the tunnel was filled with fluid would it leak to the environment outside of the tunnel. Do you agree?

A. I do not agree with this premise, especially as it relates to timing, of this suggested scenario. First, this table assumes that the capacity of the Proposed Project would be identical to the Dual Pipelines. As stated above, however, the Proposed Project will be able to operate at a greater capacity. Due to the increased capacity, there is a risk that a release along Line 5 will be greater due to the higher rate and associated reduced safety factors as operating pressure is increased along the pipeline, both onshore and within the tunnel.

Second, Exhibit S-16 scenarios assume that the only way for fluids to escape the tunnel is if the entire tunnel has overflowed with liquids. Based on my experience with propane, and as explained in more detail throughout my testimony, there is the potential for crude oil or propane to be released from the tunnel and into the Great Lakes by way of an explosion that causes the tunnel to not only fill with liquid from the pipeline failure, but also with water pouring into the failed tunnel containment caused by an explosion and loss of the concrete secondary containment integrity from explosion overpressure. Time
estimates provided in Exhibit S-16, Table 2 fail to consider this explosion/secondary containment failure and thus the times provided are unduly long (i.e., overly optimistic).

Exhibit S-16, Table 2’s approaches are predicated on the assumption the tunnel does not lose secondary containment. And the table does not even consider the consequence of possible explosion overpressure on the segmented concrete containment structure caused by a failure of the pipeline within the tunnel.

There are no guarantees that anyone would notice a release of product in the underground tunnel sooner than it takes for a release into the Straits to occur from the Dual Pipeline operation.

Q. Does the use of Computation Pipeline Monitoring alter your opinion about the way the MPSC Staff’s witnesses discuss the risks presented by the tunnel project?

A. No. In my opinion, the Staff is not taking into account that this Tunnel Project is relying too heavily on Computation Pipeline Monitoring (“CPM”) -based release detection approaches to justify its minimization of an explosion risk. Based on my knowledge and expertise with pipeline safety measures, CPM-based released detection approaches defined in federal pipeline safety regulation are not reliable enough nor rapid enough for timely indication of leak detection of the pipeline segment in the unique siting/placement within a tunnel.
The Tunnel Project primarily relies on CPM as the first level of defense with little emphasis on the importance and criticality of a secondary system, and with zero regard for how human error impacts the monitoring and effectiveness of this “secondary” approach. Staff does not take into account Enbridge’s failure to include critical details in Exhibit A-13, including the type, location, independency, calibration, maintenance frequency, and reliability of the gas detection approach. Such a second system should be given greater priority over CPM-based release detection approaches for the tunnel segment, especially given the confined space of the tunnel and the risks associated with a possibility of not only a crude oil, but a possible propane release. This second leak detection system should incorporate mandatory (even automatic) pipeline shutdown/isolation and tunnel ventilation procedures, so it should be very important that the system be designed to not generate false signals/alarms.

Q. For how long would the risk of a catastrophic explosion within the tunnel continue?
A. The risks would continue for the length of time that the pipeline is in operation within the tunnel.

III. THE MPSC STAFF TESTIMONY FAILED TO IDENTIFY REASONABLE MITIGATION MEASURES TO ABATE THE RISKSPOSED BY THE DUAL PIPELINES WHILE IT CONTINUES TO OPERATE IN THE STRAITS.

Q. Did Mr. Warner acknowledge in his testimony the risk of a release into the Straits by the currently operating dual pipelines?
A. Yes, Warner acknowledged these risks on pages 29-30 of his testimony. He described two incidents when a release could have occurred, but fortunately did not: the 2018 anchor drag in the Straits and the 2020 damage to a screw anchor support on the East Leg of the dual pipelines (an incident where the pipeline was not shut down until a court ordered it to be).

Q. Mr. Warner’s testimony summarized the mitigation measures implemented to protect the current risks to the Straits set forth in Exhibit S-6. In your opinion, do these mitigation measures really act to prevent the catastrophic event that this entire project is designed to eliminate?

A. No. Mr. Warner summarized the mitigation measures as including shore-based and/or on-water observations to monitor vessels transiting the Straits to identify any anchor strike risk, and the continuous positioning of at least one patrol boat over the Line 5 Dual Pipelines to monitor all vessel traffic operating in proximity to the Dual Pipelines. His summary relies on two factors: communication and patrol boat monitoring. When proper communication is not established from a threatening vessel, the flow of hydrocarbons through the pipeline will cease. It is my opinion that there are significant flaws with these mitigation measures.

First, monitoring of patrol boats is a factor that is weather-dependent. It is well known that the weather in the Straits of Mackinac is unpredictable, thus creating reliance on an unpredictable factor.
Second, temporarily stopping the flow of products through the pipeline is not enough of an action to prevent a major release of material into the Straits. The Exhibit S-6 Enbridge Maritime Pipeline Protection Program, or EMP3, fails to require that, in addition to temporarily stopping the flow of product through the pipeline, the two 20-inch pipeline segments be isolated to prevent the mainline pipeline from draining into the Straits from the force of gravity, should either of the 20-inch pipelines be punctured. In addition, Enbridge fails to demonstrate that adequate protection will be implemented to prevent thermal over pressure of the dual 20-inch segments if one or both are shut down and isolated.

Finally, even with additional measures in place, both monitoring and communication measures, as well as the decision to temporarily shut down the Dual Pipelines in the event of a release, remain subject to human error.

Q. Based on your expertise, and the materials that you reviewed to evaluate and rebut the testimony submitted by the MPSC staff, did you form an opinion about whether the Tunnel Project should be approved?

A. Yes. It is my opinion that the Tunnel Project should not be approved as proposed on the basis that the Staff minimized the risk of a catastrophic event when running crude oil, and especially propane, through an enclosed underground tunnel in the following ways: First, the MPSC Staff testimony does not acknowledge that human error creates a risk that crude oil and/or propane will be released in the tunnel, that there will be a delay in recognizing a release, and that the released crude oil or propane will ignite. This chain of events has the
potential to result in a catastrophic explosion. Second, the Staff does not acknowledge that relying on technology does not eliminate the risk of either a release or an explosion. Third, while the ventilation system may reduce the risk of an explosion, it will not eliminate that risk.

Finally, an over-reliance on compliance with PHMSA regulations (and a presumption that PHMSA will approve the Tunnel Project in response to Staff’s April 16, 2021 letter) as exhibited by the Staff, including Mr. Chislea (Chislea testimony at 9) and MSCA witness Mr. Cooper (Cooper testimony at 30), is not a guarantee of safety. PHMSA’s regulations are *minimum* pipeline safety requirements. Prudent pipeline operators will often exceed PHMSA’s minimum pipeline safety regulations. By way of example, 49CFR§195.234 requires that *at least* 10 percent of all girth welds be nondestructively tested. PHMSA has the authority to regulate only that percentage. However, the pipeline associated with the Tunnel Project should have 100 percent of all girth welds (both within the tunnel and the tie-ins) radiologically tested, and all girth welds properly heat treated to avoid cracking in weld heat affected zones (HAZs) that can result in a pipeline failure and release. Most new liquid pipeline construction exceeds minimum federal pipeline safety regulation in this girth weld nondestructive testing and heat treatment areas, carefully spelling out additional requirements in written Quality Administration / Quality Control (“QA/QC”) girth weld procedures that can be independently field verified and audited. MPSC testimony focuses on meeting the PHMSA standards but is silent on exceeding such standards. However, such assessments/treatments are especially important given the nature of the pipe anchoring and pipeline flexibility utilized within the tunnel. In my experience, if the girth welds and
associated HAZs are not of sufficient quality, the pipe will crack and release crude oil or propane in a manner that inline inspection tools will not likely find, creating a known and avoidable risk to the Straits.

The MPSC Staff Testimony misrepresents or overstates PHMSA’s role in “approving” such actions, such as emergency and oil spill response plans, especially as to the effectiveness of such efforts. In short, any position that minimizes risk without sound technical approaches is in and of itself a dangerous position to advance.

Q. Does this complete your testimony?

A. Yes.
EXHIBIT BMC-37
Profile:
As president of Accufacts Inc., I specialize in gas and liquid pipeline investigation, auditing, risk management, siting, construction, design, operation, maintenance, training, SCADA, leak detection, management review, emergency response, and regulatory development and compliance. I have consulted for various local, state and federal agencies, NGOs, the public, and pipeline industry members on pipeline regulation, operation and design, with particular emphasis on operation in unusually sensitive areas of high population density or environmental sensitivity.

Employment:

<table>
<thead>
<tr>
<th>Company</th>
<th>Position</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accufacts Inc.</td>
<td>1999 – Present</td>
<td>Pipeline regulatory advisor, incident investigator, and expert witness on all matters related to gas and liquid pipeline siting, design, operation, maintenance, risk analysis, and management.</td>
</tr>
<tr>
<td></td>
<td>President</td>
<td>&gt; Full business responsibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Technical Expert</td>
</tr>
<tr>
<td>Alaska Anvil Inc.</td>
<td>1993 – 1999</td>
<td>Engineering, procurement, and construction (EPC) oversight for various clients on oil production facilities, refining, and transportation pipeline design/operations in Alaska.</td>
</tr>
<tr>
<td></td>
<td>Process Team Leader</td>
<td>&gt; Led process engineers group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Review process designs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Perform hazard analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; HAZOP Team leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Assure regulatory compliance in pipeline and process safety management</td>
</tr>
<tr>
<td>ARCO Transportation Alaska, Inc.</td>
<td>1991 - 1993</td>
<td>Oversight of Trans Alaska Pipeline System (TAPS) and other Alaska pipeline assets for Arco after the Exxon Valdez event.</td>
</tr>
<tr>
<td></td>
<td>Senior Technical Advisor</td>
<td>&gt; Access to all Alaska operations with partial Arco ownership</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Review, analysis of major Alaska pipeline projects</td>
</tr>
<tr>
<td>ARCO Transportation Co.</td>
<td>1989 – 1991</td>
<td>Responsible for strategic planning, design, government interface, and construction of new gas pipeline projects, as well as gas pipeline acquisition/conversions.</td>
</tr>
<tr>
<td></td>
<td>Manager Gas Pipeline Projects</td>
<td>&gt; Project management</td>
</tr>
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<td></td>
<td></td>
<td>&gt; Oil pipeline conversion to gas transmission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; New distribution pipeline installation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Full turnkey responsibility for new gas transmission pipeline, including FERC filing</td>
</tr>
</tbody>
</table>
Managed operations of crude oil and product pipelines/terminals/berths/tank farms operating in western U.S., including regulatory compliance, emergency and spill response, and telecommunications and SCADA organizations supporting operations.

**Position:** Vice President and Manager of Operations

**Duties:**
- Full operational responsibility
- Major ship berth operations
- New acquisitions
- Several thousand miles of common carrier and private pipelines

**Arco Product CQC Kiln**  
1985

Operations manager of new plant acquisition, including major cogeneration power generation, with full profit center responsibility.

**Position:** Plant Manager

**Duties:**
- Team building of new facility that had been failing
- Plant design modifications and troubleshooting
- Setting expense and capital budgets, including key gas supply negotiations
- Modification of steam plant, power generation, and environmental controls

**Arco Products Co.**  
1981 - 1985

Operated Refined Product Blending, Storage and Handling Tank Farms, as well as Utility and Waste Water Treatment Operations for the third largest refinery on the west coast.

**Position:** Operations Manager of Process Services

**Duties:**
- Modernize refinery utilities and storage/blending operations
- Develop hydrocarbon product blends, including RFGs
- Modification of steam plants, power generation, and environmental controls
- Coordinate new major cogeneration installation, 400 MW plus

**Arco Products Co.**  
1977 - 1981

Coordinated short and long-range operational and capital planning, and major expansion for two west coast refineries.

**Position:** Manager of Refinery Planning and Evaluation

**Duties:**
- Establish monthly refinery volumetric plans
- Develop 5-year refinery long range plans
- Perform economic analysis for refinery enhancements
- Issue authorization for capital/expense major expenditures

**Arco Products Co.**  
1973 - 1977

Operating Supervisor and Process Engineer for various major refinery complexes.

**Position:** Operations Supervisor/Process Engineer

**Duties:**
- FCC Complex Supervisor
- Hydrocracker Complex Supervisor
- Process engineer throughout major integrated refinery improving process yield and energy efficiency
Qualifications:

Served for over fifteen years as a member representing the public on the federal Technical Hazardous Liquid Pipeline Safety Standards Committee (THLPSSC), a technical committee established by Congress to advise PHMSA on pipeline safety regulations.

Committee members are appointed by the Secretary of Transportation.

Served seven years, including position as its chairman, on the Washington State Citizens Committee on Pipeline Safety (CCOPS).

Positions are appointed by the governor of the state to advise federal, state, and local governments on regulatory matters related to pipeline safety, routing, construction, operation and maintenance.

Served on Executive subcommittee advising Congress and PHMSA on a report that culminated in new federal rules concerning Distribution Integrity Management Program (DIMP) gas distribution pipeline safety regulations.

As a representative of the public, advised the Office of Pipeline Safety on proposed new liquid and gas transmission pipeline integrity management rulemaking following the pipeline tragedies in Bellingham, Washington (1999) and Carlsbad, New Mexico (2000).

Member of Control Room Management committee assisting PHMSA on development of pipeline safety Control Room Management (CRM) regulations.

Certified and experienced HAZOP Team Leader associated with process safety management and application.

Education:

MBA (1976) Pepperdine University, Los Angeles, CA
BS Chemical Engineering (1973) University of California, Davis, CA
BS Chemistry (1973) University of California, Davis, CA
Publications in the Public Domain:


11. “Increasing MAOP on U.S. Gas Transmission Pipelines,” prepared for the Pipeline Safety Trust by Richard B. Kuprewicz, dated March 31, 2006. This paper was also published in the June 26 and July 1, 2006 issues of the Oil & Gas Journal and in the December 2006 issue of the UK Global Pipeline Monthly magazines.


47. Accufacts’ Report on Mariner East Project Affecting West Goshen Township, dated March 6, 2015, to Township Manager of West Goshen Township, PA, and prepared by Richard B. Kuprewicz.


56. Accufacts Review of Puget Sound Energy’s Energize Eastside Transmission project along Olympic Pipe Line’s two petroleum pipelines crossing the City of Newcastle, for the City of Newcastle, WA, June 20, 2017.


64. Report to West Goshen Township Manager, PA, “Accufacts report on the repurposing of an existing 12-inch Sunoco pipeline segment to interconnect with the Mariner East 2 and Mariner East 2X crossing West Goshen Township,” dated November 8, 2018.


67. Report to West Whiteland Township Manager, Ms. Mimi Gleason, “Accufacts Perspective on Two Questions from West Whiteland’s Board of Supervisors on Proposed Changes to ME 2 and ME 2X Construction/Operational Activities within West Whiteland,” dated September 5, 2019.”
68. Report to West Goshen Township Manager, Mr. Casey LaLonde, “Accufacts Report on the event of the evening of 8-5-19 at the Mariner East Boot Road Pump Station ("Event"), Boot Road, West Goshen Township, PA,” dated September 16, 2019.


71. Assisted the Commonwealth of Massachusetts, Office of the Attorney General in developing pipelinesafety processes to be incorporated into the settlement agreement related to Columbia Gas’ sale of Assets to Eversource following the Merrimack Valley, Massachusetts overpressure event of September 13, 2018.


STATE OF MICHIGAN  
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION  

In the matter of the Application of Enbridge Energy, Limited Partnership for the Authority to Replace and Relocate the Segment of Line 5 Crossing the Straits of Mackinac into a Tunnel Beneath the Straits of Mackinac, if Approval is Required Pursuant to 1929 PA 16; MCL 483.1 et seq. and Rule 447 of the Michigan Public Service Commission’s Rules of Practice and Procedure, R 792.10447, or the Grant of other Appropriate Relief

PROOF OF SERVICE

On December 14, 2021, an electronic copy of Rebuttal Testimony of Richard B. Kuprewicz on behalf of Bay Mills Indian Community and Exhibit BMC-37 (RBK-1) was served on the following parties:

<table>
<thead>
<tr>
<th>Name/Party</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Law Judge</td>
<td><a href="mailto:Mackd2@michigan.gov">Mackd2@michigan.gov</a></td>
</tr>
<tr>
<td>Hon. Dennis W. Mack</td>
<td></td>
</tr>
<tr>
<td>Counsel for Enbridge Energy, Limited Partnership</td>
<td><a href="mailto:mashton@fraserlawfirm.com">mashton@fraserlawfirm.com</a></td>
</tr>
<tr>
<td>Michael S. Ashton</td>
<td><a href="mailto:sreed@fraserlawfirm.com">sreed@fraserlawfirm.com</a></td>
</tr>
<tr>
<td>Shaina Reed</td>
<td><a href="mailto:jheston@fraserlawfirm.com">jheston@fraserlawfirm.com</a></td>
</tr>
<tr>
<td>Jennifer Utter Heston</td>
<td></td>
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