



# Billings Refinery

December 12, 2016

Dear Council Member:

Please find attached a copy of the minutes from our **November 15, 2016** CAC meeting.

Just a reminder that the next CAC meeting will be **TUESDAY, DECEMBER 13, 2016** at the Phillips 66 Learning Center. The meeting will run from 5:30 to 7:30 p.m. Dinner will be served from 5:00 to 5:30 p.m.

Sincerely,

Ann L. Clancy, Ph.D.  
Meeting Facilitator

**Meeting Location: Phillips 66 Learning Center  
415 South 24<sup>th</sup> Street**

**PHILLIPS 66 BILLINGS REFINERY  
CITIZENS ADVISORY COUNCIL  
November 15, 2016**

**MEETING MINUTES**

**Present:** Council members: Keith Beartusk, Dale Fincel, Travis Harris, David Hobbs, Rob Lowe, Bruce MacIntyre, Shirley McDermott, Gregory Neill, Melissa Patton, John Pulasky, Jim Ronquillo, Heather Schwab, Melanie Schwarz, Jim Stevenson, Andrew Sullivan, Mike Yakawich, Stella Ziegler  
Phillips 66 management: Colin Franks  
Midstream: Mark Hilbert, Morgan Remus  
Facilitator: Ann Clancy

**Absent:** Paul Dextras, Ralph Hanser, Bob Hoar, Ray Rigdon, Emily Shaffer

**Guests:** Kary Parks, Dispatcher, Hanser's  
John Welch, Plant Manager, Jupiter Sulphur LLC  
City College Students: Brad Cash, Courtney Lohrmeyer, Alex Songstad, Richard Stalker, Hunter Wester, Dayton Willoughby, Kyle Wilson

**AGENDA**

- Welcome/Introductions
- Honoring Mark Hilbert
- Future of Moving Petroleum & Petroleum By-Products Panel Discussion
- Refinery, Midstream & Community Updates
- Next CAC Meeting: December 13, 2016

**WELCOME/INTRODUCTIONS**

Colin Franks welcomed members and guests and introductions were made.

**Honoring Mark Hilbert**

Colin presented CAC member Mark Hilbert with a plaque honoring his seven years of service with the Council representing Phillips 66 Midstream. Jim Ronquillo also honored Mark with a special memento. Mark was a dedicated member who made numerous presentations on transportation/Midstream services over his tenure and he participated enthusiastically in Council activities. His support will be greatly missed. He is replaced by Morgan Remus, Operations Superintendent, P66 Midstream, Billings Division.

**FUTURE OF MOVING PETROLEUM & PETROLEUM BY-PRODUCTS PANEL DISCUSSION**

CAC member John Pulasky acted as moderator for the panel discussion which included the following panelists: Terry Whiteside, Transportation Consultant; Carrie Wildin, Division Engineering Director; Howard Butler, former plant manager; and Stephen Sideman, Billings

Refinery Optimization Manager. The theme for the panel was the future economic and community impacts of moving petroleum and its by-products by rail, pipeline and trucking.

### **Community Perspective**

Transportation Consultant Terry Whiteside, an ex-Conoco employee, represented the community perspective of the future economic and community impacts of moving petroleum and its by-products. For Terry, this perspective encompasses safety, environmental, regulatory and economic issues. He sees stakeholder involvement as including citizens, communities, industries and government entities.

He asked the question, “Which was the safest transportation mode – rail, trucking or pipeline?” Most agreed that the pipeline was the safest way to move petroleum products. He reported that in terms of safety and environmental impact in transportation that pipelines are still the safest followed by rail and then trucking.

In terms of community involvement, he stated that the goal of most citizens is to define and work towards what is good for everyone but he pointed out that everyone is different. He suggested that there is really only one kind of interest – *self-interest* – which varies among stakeholders. His viewpoint was that community involvement can improve a project but rarely stops it from happening. He said it is difficult to stop economic development.

He presented maps of the national and regional networks of pipelines that crisscross the country. He spoke in favor of the greater safety factor inherent in moving product by pipeline. He presented the example of the Colonial Pipeline Company based in metropolitan Atlanta, Georgia. Every day, it safely and efficiently delivers more than 100 million gallons of gasoline, home heating oil, aviation fuel and other refined petroleum products. Colonial consists of more than 5,500 miles of pipeline, most of which is underground along with aboveground storage tanks which support safe operations of the overall system.

Terry noted that established railroad systems provide another means of transportation to oil companies whose facilities are too far flung to justify investing in pipeline construction. According to Terry, rail has carved out about a 47% niche in moving petroleum products nationally.

### **P66 Pipeline Transportation Now & Into the Future**

Carrie Wildin, Billings Division Engineering Director with P66 Midstream, heads the engineering group in the Billings area that includes operations, integrity management, and expense and capital work. In general, she views pipelines as co-existing with rail and trucking as modes of transportation for petroleum products. She spoke to the size and scope of P66 pipeline operations nationally which includes more than 900 employees, greater than 12,000 miles of pipeline systems and 42 truck distribution sites or terminals.

She stated how safety is a key performance factor and shared some data of how P66 compares with industry peers in terms of spill data. The volume of spills is down overall and has been declining for P66 since 2012 as a result of the company’s focus on continuous improvement and a goal of zero incidents.

She presented a map of the Billings Division five pipeline systems that are run by 119 employees, 48 located in Billings. The Division operates 2,316 miles of DOT pipeline, operates 13 terminals and has storage capacity for 3 million barrels.

Carrie provided an update on the Missoula to Thompson Falls transport of petroleum products by rail. The pipeline that ran through the Flathead Reservation was abandoned in the 1990's because of the tribe's refusal to renew transportation rights for the company. There had been a couple of spills on reservation land so the company lost the right to maintain operations. After negotiation efforts to reinstate the pipeline failed, the company built a rail terminal. Over time, some of the abandoned pipeline had to be pulled out and there was also pipeline that traveled through US Forest Service land. A right of way permit renewal process was picked up again with the Forest Service to put a pipeline back in service but was not successful. The Forest Service would like pipeline removed which is not economically feasible at this time. She noted that it would be more cost effective to build a new pipeline but that is also not economically viable as there are many river crossings in the Forest Service terrain. The company will continue to use rail through this area for the foreseeable future according to Carrie.

She gave an update on what's happening in the Bakken area. She presented a map showing pipeline construction currently underway from Johnson's Corner to Keene, about 13 miles of a 16 inch pipeline with bi-directional capability. P66 is joint venture partner with Paradigm constructing the assets and P66 commissioning and operating the pipeline. There is also a 70 mile 16 inch Sacagawea Pipeline, a Palermo pipeline facility, and another 8 mile 12 inch pipeline from Palermo to Stanley Enbridge. All of the construction will be completed in 2017. There is also a rail facility at Palermo which ships product to the east coast and to Ferndale.

Carrie addressed what is currently happening with the Dakota Access Pipeline (DAPL), an underground pipeline currently under construction in North Dakota where a large contingent of Native Americans and environmental activists has been protesting the pipeline construction for months. DAPL is a 1,172 mile state-of-the-art pipeline with more than \$1.5 billion invested in its construction. It is a joint venture project led by Texas-based Energy Transfer and P66 owns a 25% interest in the venture. It employs more than 8,000 highly skilled labor workers. The Dakota Access team has followed the established permitting process including multiple public comment opportunities and addressing concerns raised during that process. DAPL met with 55 different tribes on 389 occasions including nine meetings with the Standing Rock Sioux tribe. A federal judge ruled that the project is in compliance with US rules and regulations but the Army Corps of Engineers has asked for additional study before making a decision regarding the crossing of Lake Oahe. Construction continues except in the area of protest to ensure safety of the construction crews and protestors.

She provided information on the main pipeline control center for P66's pipeline operation and surveillance which is located at Bartlesville, Oklahoma. The 24/7 control center follows pipeline risk management protocols and operates a computer-based leak detection system with shut-down authority. The company follows a pipeline release reduction approach as part of its "Think Leak" culture which means, when in doubt, shut it down and block it out until proven leak-free.

Carrie pointed out how all pipelines in the US are governed by the US Department of Transportation – Pipeline Hazardous Materials Safety Administration (PHMSA – DOT 195). To comply with regulations, P66 has developed a Comprehensive Integrity Management Plan which utilizes numerous smart PIGS (pipeline integrity gauges) to detect leaks, cracks, dents, corrosion and other risks associated with pipeline operation and aging. P66's program does high risk evaluations, cumulative corrosion analysis, pipeline replacements, leak detection, coating repairs, dead leg removals, tracer gas testing, river crossing risk reduction, land movement mitigation and out of service pipeline verification.

Carrie updated CAC members on the company's Water Crossing program which receives support from PHMSA, the Montana State Governor's Office (DEQ, DNR) and the US Army Corps of Engineers. There are four Yellowstone River crossings in the Billings area, two have been replaced and the final two will be completed by horizontal directional drilling (HDD) in 2017. These are stable areas with adequate water cover. The HDD technology was not available when the pipelines were laid in the 1950's and 60's.

In terms of the future, Carrie sees nothing but growth in production with the shale revolution which has shown a 41% increase in natural gas production, 66% in crude oil production, and 72% in NGL production from 2005 to 2014. She estimates the U.S. Midstream industry may require more than \$200 billion of investment by 2035. In terms of what's next for pipelines, she outlines the following:

- Focusing on High Standards of Safety & Environmental Excellence
- Increasing Regulation
- Focusing on Lower Risk Tolerance, Internal and External
- Continuing Infrastructure Construction through replacement and with new construction for increased production of natural gas, crude and NGL

### **Billings Jupiter Sulphur**

Howard Butler, former plant manager for Jupiter Sulphur, introduced the new manager, John Welch, who came as a guest to the meeting. Howard began with some facts about Jupiter. It is a 50/50 joint venture between Phillips 66 and Tessengerlo Kerley (TKI). As the P66 Refinery has no sulfur processing capacity, Jupiter processes 100% of the refinery's acid gas and SWS gas streams. It started operation in 1990 and TKI operates the plant, providing management, marketing of products, and tech Support. Jupiter is 100% reliant on rail and truck transportation. There are 25 employees.

Jupiter has bought land and expanded with \$130 million in capital investments including NaHS product, a new third sulfur train, and new truck rack and expanded rail rack. In terms of raw material, Jupiter receives sulfur and utilities from the P66 refinery via pipeline. It receives ammonia for fertilizer from Canada, 50% by rail and 50% by truck. The transportation cost is 40%. Railroads are reluctant to ship ammonia because it is considered a toxic hazardous chemical. Jupiter is evaluating the idea of producing ammonia on site. Jupiter products are shipped out, 70% by rail and 30% by truck, to Montana (15%), Idaho (30%), Washington (30%), Nevada (15%), and Utah (5%).

Jupiter's main products are:

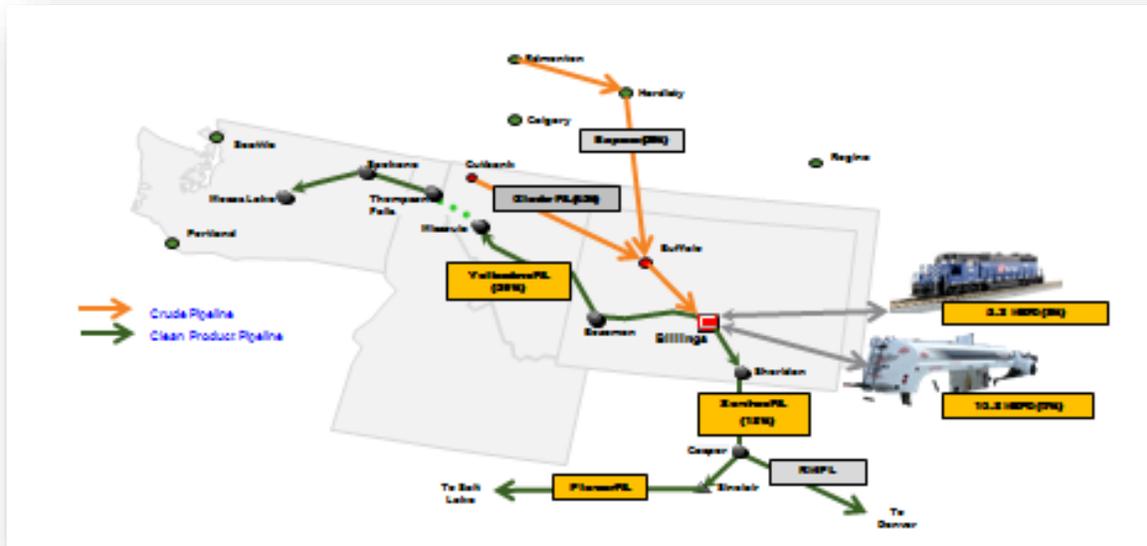
- Thio-Sul (Ammonium Thiosulfate), sold as a liquid fertilizer to Idaho and Washington and sent by rail and truck seasonally
- ABS (Ammonium Bisulfate), a liquid product sold as food grade oxygen scavenger and mining cyanide scavenger, sent 90% by truck in Montana
- NaHS (Sodium HydroSulfide), used in the mining industry for sulfidizing ores, sent by rail and truck to Utah and Mexico
- Molten sulfur, sent to Nevada via insulated atmospheric trucks

Howard summarized his presentation by noting that Jupiter is dependent on safe, affordable truck and rail transportation which is managed jointly from Phoenix and locally. The plant is

expanding on site rail storage and is managing ammonia shipping challenges from rail regulations.

### Future of Moving Petroleum

Stephen Sideman, Optimization Manager at the Billings Refinery, presented a “map” of the Billings refinery logistics in terms of moving product. He defined optimization as coordinating all incoming crude and deciding how much product to make and where to send it out. The Billings Refinery benefits because of its proximity to crude oil from Canada and clean product pipelines.



Stephen reported that 98% of crude oil is brought in via two pipelines: Glacier Pipeline from Edmonton to Cut Bank and then Billings, and Express Pipeline from Hardisty through Montana to Buffalo and then Billings. Only 2% is shipped by local truck from MT/WY from local wells. There are no crude pipelines from the Bakken area. The light crude is more expensive than the heavier Canadian crude and the way the refinery is configured prohibits taking in Bakken light oil which is also expensive to truck.

He mapped out gasoline/diesel delivery movements. He stated that all volumes are delivered to gas stations via truck or shipped via pipeline to central truck terminals. About 10% of volume is moved across the refinery’s local truck rack. There is no rail movement out of the refinery with the exception of shipping about 10 railcars of coke product per day. Shipping the coke actually costs the refinery. Otherwise the refinery ships/receives about 1-2 railcars a day for propane, butane, and clarified products and about 6-10 trucks per day to ship propane/butane.

The following questions and comments were recorded following the panel presentations:

- *Do the other two refineries in Billings have a similar set up as Jupiter?* Jupiter is unique technology. It sucks out sulfur using ammonia. Exxon uses bentonite clay to make pellets and Cenex produces just liquid sulfur.
- *Billings seems to be a hub for rail and truck shipping. If a rail incident were to occur in downtown Billings, is there a plan to provide emergency services in the community?* Railcars are being improved to minimize the impact of fire should an accident occur. Local responders are hazmat trained. P66 has different plans in place for emergency response

and oil spill response for the whole community. There are also drills and practices including boom drills on water and testing. State agencies also do unannounced drills to deploy resources for quick responses. The industry is required by government regulations to have worst case scenario responses in place and to conduct drills for such scenarios every two years. The railroad has similar regulations to respond to.

- *Does Billings have an emergency response plan?* Yes, there is a local emergency planning committee. The different industries have a tiered approach to emergency response and cooperate with all member companies to share and deploy assets and all work together with the Billings Fire Dept. The City Council has been focused on rail traffic downtown, for example establishing a quiet zone and speed up zone. Billings is in a critical situation because of the proximity of the refineries to downtown and the fact that downtown buildings could catch on fire. There should be an alternative route for the trains going through downtown but any plans to move the tracks has proved to be cost prohibitive.
- *What's going to happen with the demonstrations directed at the Dakota Access Pipeline?* There is an economic need to move the crude oil in that direction and that won't be stopped but hopefully it will be improved. It will take a lot of money and time; there has already been a million dollar cost in responding to delays and violence.
- *Flathead Reservation, how many trucks?* There is only the railroad – about 60 cars a day where the pipeline used to run.
- *When the company negotiated with the tribe, how much money was involved?* Every agreement is different and in the millions annually. The railroads also have to negotiate with the tribes. There are easements coming due.
- *What's the longevity of the internal combustion engine going forward with electric cars?* It will be a long time yet. But it is a finite resource and we are consuming more.
- It's interesting from the student perspective to see where things will be headed when we grow up. It should be better, more knowledge and more corporate responsibility.

## **REFINERY UPDATE**

**Operations, Safety & Environmental:** The refinery is running reliably and we are celebrating milestones: 1 million hours with no injuries and one year with no recordable injuries. There have been no environmental events. We have the top safety and environmental records within the P66 circuit.

**Vacuum Improvement Project:** The project is moving forward with 800 contractors now in the plant working safely. The turnaround will start April 13 and the project will be completed by the end of March. The turnaround will end in June when the refinery comes back on line.

**Question:** *Cenex has moved its personnel offices out of proximity to the plant's refining units. Is there any of that planning for P66 personnel offices?* Yes, P66 has looked at the radius for explosions, where people are located and has identified areas of acceptable proximity/range.

## **MIDSTREAM UPDATE**

**Operations:** Things are winding down.

**Safety & Environmental:** There have been no incidents or injuries since the last meeting. We are celebrating a two-year anniversary in the Billings Division of no injuries and no spills of more than one barrel.

**Projects:** We have bundled crossings that Carrie Wildin is heading up – the pipelines under the Yellowstone River.

**Question:** *Do you have to pull out the old pipelines?* It depends on the situation. Sometimes to pull them out can cause damage. If that is the case, they are cleaned out well and filled with a grout substance and steel degrades. If pipelines are exposed, they have to be taken out.

## **COMMUNITY UPDATES**

Melanie Schwarz reported that Big Sky Economic Development is working on three major projects:

- Lockwood Targeted Economic Development District (TEDD).
- One Big Sky Center, the new high rise downtown proposal which the City Council has approved to move ahead with support to determine long term financing.
- The old James F. Battin federal courthouse which was sold at a foreclosure sale to WC Commercial LLC. Joe Holden, managing member of the WC, has reported that he is looking for a contractor to abate asbestos and remodel the building into quality office space.

Mike Yakawich invited CAC members to the Southside Community Center at 10:30 a.m. on November 17 to watch a movie of one of Billings' hometown heroes, Ben Steele. In the movie Ben recalls his time in WWII and as part of the Bataan Death March. In honor of Veteran's Day, the hour-long movie will be followed by a luncheon.

## **NEXT MEETING: December 13, 2016**

- Welcome/Introductions
- State Legislative Update for 2017 & National Election Impacts
- Refinery, Midstream & Community Updates
- Debrief Meet in the Park: Vendor Feedback
- January 28, 2017 Retreat Session