



Billings Refinery

February 17, 2015

Dear Council Member:

Please find attached the minutes from our February 10, 2015 CAC meeting. The next CAC meeting will be on **TUESDAY, MARCH 10, 2015** at the **City College campus and the Process Plant Technology Lab**. Dinner will be from 5:00 to 5:30. The meeting will run from 5:30 to 7:30 and include a lab tour and demonstrations. A map along with the agenda will be sent later.

Sincerely,

Ann L. Clancy, Ph.D.
Meeting Facilitator

**Meeting Location: City College
3803 Central Ave
2nd Floor, Room B036**

**PHILLIPS 66 BILLINGS REFINERY
CITIZENS ADVISORY COUNCIL
February 10, 2015**

MEETING MINUTES

Present: Council members: Bob Carr, Travis Harris, Shirley McDermott, Gregory Neill, John Pulasky, Emily Shaffer, Andrew Sullivan, Mike Yakawich, Michelle Zahn, Stella Ziegler
Phillips 66 management: Ray Rigdon, Colin Franks, Randall Richert, Mark Hilbert
Facilitator: Ann Clancy

Absent: Keith Beartusk, Paul Dextras, Lance Johnson, Ralph Hanser, Bruce MacIntyre, Eileen Morris, Melissa Patton, Jim Ronquillo, Melanie Schwarz,

Guests: MSU-B Process Plant Technology students: Michael Baker, Trent Bauwens, Adam Goodburn, Austin Pickering, Joseph Wyatt
MSU-B student: David Fredrickson, ASMSUB Sustainability Coordinator

AGENDA

- Welcoming New Members/Introductions
- Community Updates
- Finalizing CAC 2015 Strategic Plan
- Presentation: Update on Refinery Status for 2015
 - Refinery products & byproducts
 - Update on arsenic water treatment project
 - Update on Vacuum Unit improvement project
- Refinery & Transportation Updates
- Next Meeting: March 10 Site visit to City College

WELCOMING NEW MEMBERS/INTRODUCTIONS

Welcoming New CAC Members & Guests

Travis Harris, Staff Engineer II with the City of Billings, was introduced as a new CAC member replacing Ken Ard, City of Billings' representative on the CAC. Greg Neill, Emergency Preparedness Coordinator with RiverStone Health was also introduced as a new CAC member replacing Josh Juarez as a health care representative.

The following MSU-B Process Plant Technology students were present: Michael Baker, Trent Bauwens, Adam Goodburn, and Austin Pickering. Joseph Wyatt, Process Plant Technology program graduate and current student in the MSU-B College of Business was present and brought a guest, David Fredrickson, a senior at MSU-B and ASMSUB Sustainability Coordinator.

Community Updates

Katey Plymesser, professor engineering at MSU-B, informed members that MSU-B was in the process of a series of significant budget cuts that Chancellor Mark Nook has been announcing. The cuts are a result of the decline in enrollment numbers. MUS-B will eliminate two majors and its tennis teams and will implement some layoffs to offset a budget shortfall for the 2015-16 school year. The decline in enrollment numbers is impacted by the decline in the number of high school students and also by the struggle with student retention and the time it takes to complete a degree and graduate.

FINALIZING CAC STRATEGIC PLAN FOR 2015

The following activities, goals, timelines and team members were identified and agreed upon:

Activities & Goals for 2015	Timelines/Actions
<p>CAC Theme for 2015: <i>Focus on Youth & Education</i></p> <ul style="list-style-type: none"> • Focus on moving forward, diversity • Take City College student model and apply to Career Center students to include them • Interact with K-12 students, especially middle students 	<p><u>Timeline:</u> Meet as a team in March/April to determine opportunities & CAC focus for 2015 regarding focus on youth <u>Team:</u> John Pulasky, Keith Bear Tusk, Andy Sullivan, Katey Plymesser, Luke Ward or Kayhan Ostover from RMC, Ann Clancy</p>
<p>CAC Outreach Theme for 2015: Interconnectivity with Community & Other Industries</p> <ul style="list-style-type: none"> • Interconnectivity with other industries (e.g., agriculture, transportation, pipelines, railroads, health care, education) • Continue with the subteam on Connection to other CACs in the region • Refining 101 presentation to community (e.g., Breakfast Flakes) • Approach Leadership Montana & Ambassadors to see if they have an interest in the CAC & refinery as part of their education • MSU-B College of Business student internships at the Billings refinery • Potential panel discussion including representatives from other community-industry organizations 	<p><u>Timeline:</u> Meet as a team in March/April to determine outreach opportunities for 2015 regarding focus on connecting with other CACs & interconnectivity with community & other industries <u>Team:</u> Bob Carr, Melanie Schwarz, Travis Harris, Ann Clancy</p>
<p>Focus on CAC Ongoing South Side Outreach</p> <ul style="list-style-type: none"> • Improve and make consistent grassroots outreach efforts to Southside residents & businesses (e.g., annually) • Involve students in this effort • Inform people about sirens, emergency preparedness, basic info as who to call, setting up a better phone tree, mass calling preparedness for emergencies, etc. • Bring to the table what has already gone on, mailings, outreach in the past as a review, Conoco magnets, fact sheets, materials for a table, PSA, etc. Ideas on magnets, fact sheets and/or other materials we can consider for door to door, mailings, materials for a table, PSA and etc. 	<p><u>Timeline:</u> Team to meet March 5 <u>Team:</u> Mike Yakawich, Colin Franks, Mark Hilbert, David Fredrickson, Jim Ronquillo, Joseph Wyatt, Ann Clancy</p>

<p>City College Connection/Site Visit</p> <ul style="list-style-type: none"> • Onsite visit in March 2015; invite students; have students run demonstrations in lab • Share what's going on at City College (other programs) • Have speakers from administration; invite Chancellor if available • Keep inviting students to CAC meetings • Encourage students to have a presence at Meet in Park event 	<p><u>Timeline:</u> March 10 CAC Mtg.</p> <p><u>Responsible:</u> Andy Sullivan, Ann Clancy</p>
<p>Refinery tour for CAC members and Students</p> <ul style="list-style-type: none"> • Design for CAC members & students • Have Refining 101 presentation by Andy Holman • Include as many students as possible from Process Plant Tech program, MSU-B engineering program & RMC environmental science students • Give preference to MSU-B Process Plant Tech students • Ann to find out number of students interested in attending from Katey, Andy & Luke 	<p><u>Timeline:</u> April 14 CAC Mtg.</p> <p><u>Responsible:</u> P66, Andy Sullivan, Katey Plymnesser, Luke Ward/Kayhan Ostovar</p>
<p>Pipeline Safety Presentation</p> <ul style="list-style-type: none"> • Update on pipeline spills & safety measures • Mark has identified two speakers to address control systems & leak detection and river mitigation efforts • Invite DEQ representative who works with pipeline safety to participate 	<p><u>Timeline:</u> May 12 CAC Mtg.</p> <p><u>Responsible:</u> Mark Hilbert</p>
<p>Legislative Reports</p> <ul style="list-style-type: none"> • Bruce MacIntyre, Chamber lobbyist, provides legislative activities and decisions on energy & environmental issues • Dave Galt, Director of Montana Petroleum Institute, presents energy industry legislative report & addresses economic impact of oil prices on economic development and how healthy the industry is • CAC members can invite guests; students welcome 	<p><u>Timeline:</u> June 10 CAC Mtg.</p> <p><u>Responsible:</u> Bruce MacIntyre, Dave Galt (P66), Ann Clancy</p>
<p>Meet in the Park Event</p> <ul style="list-style-type: none"> • Set a date in September for event & get permit • Link with RSH Gardener's Market which meets on Thursdays • Have a booth on what's behind gas prices in the area including fuel costs, fuel specs, winter/summer blends • Continue to include students • Repeat & expand community involvement on what was offered in 2013 (door to door flyers) 	<p><u>Timeline:</u> September date TBD Team mtg. in late March and report out at May 12 CAC mtg.</p> <p><u>Team:</u> Colin Franks, Paul Dextras, Bob Carr, John Pulasky, Michele Zahn, Emily Shaffer, Randall Richert, Jim Ronquillo, Andy Sullivan, Greg Neill, Ann Clancy</p>
<p>Panel Discussion: Alternate Energy, Bakken, Fracking</p> <ul style="list-style-type: none"> • Represent multiple perspectives on development of alternate energy sources • Status report on Bakken oil development • Information on fracking 	<p><u>Timeline:</u> October 13 CAC Mtg.</p> <p><u>Team:</u> Shirley McDermott, Keith Beartusk, Ann Clancy</p>
<p>Celebration of 25 years of CAC</p> <ul style="list-style-type: none"> • Multi-Pronged Approach 	<p><u>Timeline:</u> November 10 CAC Mtg.</p>

<ul style="list-style-type: none"> • Good PR program throughout the year, highlighting historical things from those years. Recognize employees who did something special to build more of a tie with community. • Do a series of information about Phillips 66 for the community like interviews with a P66 rep and a CAC rep together to talk about the collaboration and community engagement. • Involve a broad cross section of the community in learning about the CAC and the commitment made by P66. This should be a carefully planned event with news worthy information shared during the year culminating with the “Meet & Greet.” • Pursue news article. Poster/logo for use in communications and activities this year. Evaluate CAC historian materials and location of materials. Group photo, plaque at refinery, etc. • Throw a Party <ul style="list-style-type: none"> • Big gathering with past & present members to include a meal and state of union address from refinery & CAC member. Cater in a nice dinner or go to a restaurant to celebrate. • Focus Efforts at South Park Event <ul style="list-style-type: none"> • Use the South Park approach. No need to spend more money. Just expand if possible. It’s a wonderful community program that highlights Phillips 66 good work and outreach. • No Extra Effort <ul style="list-style-type: none"> • Not sure anything special is warranted other than giving the previous members a salute and ourselves a pat on the back. 	<p>Meet as a team in March to come up with a plan to present to CAC</p> <p><u>Team:</u> Colin Franks, Stella Ziegler, Michele Zahn, Ann Clancy</p>
<p>Panel Discussion: Update on City of Billings Activities</p> <ul style="list-style-type: none"> • Include DBA, EBURD, BSED, Chamber, Business Improvement District, Homelessness Committee 	<p><u>Timeline:</u> December 9 CAC Mtg.</p> <p><u>Team:</u> Melanie Schwarz, Bob Carr, Travis Harris, Ann Clancy</p>

FOR FURTHER CONSIDERATION

<p>Refinery Philanthropic Reports</p> <ul style="list-style-type: none"> • Give a report half-way through the year and again at the end of the year 	<p><u>Timeline:</u> June 10 & December 8 CAC mtgs.</p> <p><u>Responsible:</u> P66</p>
<p>Panel Discussion: Community-Industry Outreach</p> <ul style="list-style-type: none"> • Panel of organizations involved in some level of community-industry citizen outreach: MSU-B College of Business Advisory Board, ExxonMobil Community Advisory Panel, Stillwater Mining Company (e.g., <i>Chris Dimock, Dan Carter, John Beaudry</i>) 	<p><u>Timeline:</u> TBD</p> <p><u>Team:</u> Melanie Schwarz, Bob Carr, Travis Harris, Ann Clancy</p>
<p>Maintain & Update Local Sustainable Development Scorecard</p> <ul style="list-style-type: none"> • Present this as part of community outreach efforts • Keep CAC updated annually 	<p><u>Timeline:</u> TBD</p> <p><u>Responsible:</u> Randall Richert</p>

CAC 2015 TIMELINE

The following timeline has been scheduled, subject to changes as the year unfolds:

Month	
February 10	Finalize 2015 strategic plan Update on Refinery: refinery byproducts, vacuum improvement project, arsenic water treatment project <ul style="list-style-type: none"> • <i>Community, Refinery & Transportation Updates</i>
March 10	City College Onsite Visit & Tour <ul style="list-style-type: none"> • <i>Community, Refinery & Transportation Updates</i>
April 14	Refinery Tour & Refining 101 presentation <ul style="list-style-type: none"> • Student participants (MSU-B, City College, RMC) • <i>Community, Refinery & Transportation Updates</i>
May 12	Pipeline Safety Presentation <ul style="list-style-type: none"> • Update on pipeline spills & safety measures • Two speakers to address control systems, leak detection and river mitigation • DEQ representative to be invited who works with pipeline safety Update on Meet in Park Subteam <ul style="list-style-type: none"> • <i>Community, Refinery & Transportation Updates</i>
June 10	Legislative Reports on Energy & Environmental Issues <ul style="list-style-type: none"> • Bruce MacIntyre, Chamber lobbyist, reports on legislative activities on energy & environmental issues • Dave Galt, Director of Montana Petroleum Institute, presents energy industry legislative report & addresses economic impact of oil prices on economic development and the health of the industry First Refinery Philanthropic Report <ul style="list-style-type: none"> • <i>Community, Refinery & Transportation Updates</i>
<i>July</i>	<i>No CAC meetings</i>
<i>August</i>	<i>No CAC meetings</i>
September TBD	Meet in the Park Event in South Park
<i>Mid-September</i>	<i>Yellowstone River Clean-Up, CAC & P66 participation</i>
October 13	Panel Discussion: Alternate Energy, Bakken, Fracking <ul style="list-style-type: none"> • <i>Community, Refinery & Transportation Updates</i>
November 10	Celebration of CAC 25th Anniversary
December 8	Panel Discussion: Update on City of Billings Activities Second Refinery Philanthropic Report <ul style="list-style-type: none"> • Refinery philanthropic report to date • <i>Community, Refinery & Transportation Updates</i>

UPDATE ON REFINERY STATUS FOR 2015

Billings Refinery Products & Byproducts

Colin Franks gave an overview of the products and byproducts produced at the refinery. He began with a schematic that showed the different units in the refinery and their relationship to one another in terms of producing products and by products.

Products & Byproducts

- Gasoline
 - Butane (used to blend with gasoline)
 - Reformate
 - LSR
 - Alkylate
 - FCC Gasoline
- #2 Road Diesel Fuel, some dyed diesel
- Jet Fuel, #1 Kerosene
- Aviation Gas
- Coke (solid material used for fuel at power plants and cement kilns)
 - Fuel for power plants
 - Fuel for cement kilns
- Butane – Iso and N
- Propane
- Clarified Oil – Carbon black products
 - Food Grade – Makeup (Mascara)
 - Mid Grade – Toner for printers and copiers
 - Low grade – Tires
- Sour Gas (goes to Jupiter)
 - ATS (Ammonium Thiosulfate): Sold as liquid fertilizer
 - ABS (Ammonium Bisulfite): Sold as a Food Grade O₂ Scavenger (binder); Mining Cyanide Scavenger (binder)
 - ASD (Ammonium Sulfide): Sold to TKI to make APS
 - Sulfur (molten) to make acid or fertilizer

The following question by a CAC member was recorded:

- *Where do the byproducts come from?* The refinery wants to make as much gasoline, diesel and jet fuel as it can and minimize the other byproducts. There is a whole suite of waste materials that are sold as well.

Status of Billings Waste Water Arsenic Treatment Project

Colin Franks provided some history and an update on the Billings waste water arsenic treatment project. He showed an aerial map indicating the discharge location to the existing sewer line to the water treatment plant that passes by the Billings Refinery.

- Objectives of the Project
 - Comply with the requirements of the MT DEQ Montana Pollutant Discharge Elimination System (MPDES) discharge permit by June of 2014
- Scope of the Project
 - Refinery waste water effluent was re-routed to the City of Billings Publicly Owned Treatment Works (POTW) with additional arsenic treatment
 - Clean storm water is being routed to the Yellowstone River via the Yegen Drain

- Benefits of the Project
 - Routing the refinery effluent to the POTW was the most cost effective option to comply with the MT DEQ MPDES arsenic limits

Project Scope Details

Colin showed a simplified process flow diagram, a project model view and photos of the waste water arsenic project units.

- Install arsenic treatment
 - 700 gpm facility - inject ferric chloride, thus converting arsenic to solid
 - Install granular media filters for the removal of ferric hydroxide solids that contain arsenic
 - Design (only) of secondary adsorptive media vessels
- Route refinery waste water effluent to City
- Segregate and route clean storm water to the Yegen Drain
- Project cost – about \$20 Million, including a \$ 2 Million “connection” fee to the City

Project Update

Colin concluded with a project update.

- Started up the arsenic treatment facilities on May 15, 2014
- Started discharging refinery waste water effluent to the City on May 29, 2014
- Experienced some equipment reliability issues early in startup, nothing significant
- No arsenic exceedances of permit limit to date
- Project cost escalation from \$20 million to about \$26 Million

The following questions/comments by CAC members were recorded:

- *Does the Yegen Drain go through Refinery property?* The drain floats through refinery property and was used as a discharge point only. Sometimes the refinery can see a sheen or darker colors in the water of the drain and they report to the City any findings they make.
- *What happens with the arsenic?* It gets bound to solid material, concentrated, filtered and sent to a landfill.
- *What about the arsenic level of the Yellowstone River?* The Yellowstone runs at a higher natural arsenic level (9-13 ppb) so the project results in a lower rate required (5 ppb) than what naturally occurs.
- *Do you have a target percentage for arsenic level?* Arsenic levels vary over time in terms of daily flow and the refinery is well under the requirements. In fact, the Billings refinery is the first arsenic removal project in any refinery in the U.S. ExxonMobil is now looking to do the same thing.

Status of Vacuum Unit Improvement Project

Colin reported on the status of the vacuum unit improvement project which is currently the largest capital project in the company. It is hoped to be started in 2015 and completed in 2017. The purpose of the unit will be to glean more gasoline and diesel out of the crude oil refining process. A request for initial funding will be made next week to the company’s executive leadership team. This project would also include a significant upgrade to the Jupiter plant. This project would involve revamping a number of other units in the refinery as well so it is a large footprint of change to the overall processing area.

The following questions/comments by CAC members were recorded:

- *Will all crude oil go through this unit? Only the heaviest part of the crude oil would be refined through the unit.*
- *Is the fuel mostly from crude oil? This project would allow the refinery to use cheaper crude oil in its refining process but no crude from the oil sands.*
- *How much of the construction dollars would stay in Billings? There would be local people to work on the project and some travelers would come in with special expertise. There would also be some local engineers who would work with others from out of state.*
- *Will the refinery need to go offline? We would try to build the new unit while continuing to run the refinery. At completion, the refinery would shut down in 2017 and be started back up with the new units.*

TRANSPORTATION UPDATE

Mark Hilbert reported the following:

Operations: January was a very slow month in terms of rights of way due to the time of the year. Two of three production lines are running at capacity. There was an incident in the Seminole line running south. One of the “smart pigs” got stuck out of Sheridan in a fitting which resulted in shutting down the system to cut it out. That line is back in operation.

Safety: There was one recordable injury in Buffalo, MT. A contractor got a flash burn from a propane heater on his face.

Projects: There are two pipelines to go over the river at the Alkali Creek Bridge. They are being replaced to reduce corrosion. The Seminole line crossing under the Yellowstone River will be rebored to lie at about 40 feet under the river. That project would take place in April-May but is still in the permitting process.

REFINERY UPDATE

Ray Rigdon reported the following:

Operations: The refinery is running well.

People: The refinery leadership is distracted by the union contract negotiations. All the local issues were settled by January 31 but the contracts at the national level have not been settled. The refinery is on a 24-hour rolling extension. They would get a 24 hour notice if workers are to go out on strike. It is expected nationwide that more refineries will go out on strike. Of the Phillips 66 refineries only the Billings, Ferndale, Washington, and the California refineries are affected but none have been called to go on strike yet. All of P66 refineries have completed their local bargaining. The refineries on strike so far are where local negotiations have not been going well. The last national strike was in 1980. It is now going on 9 weeks. When workers are on strike they do not get paid until they've not worked for one month and they have to pay 100% of their medical costs during the strike period.

NEXT MEETING: MARCH 10

- Welcome/Introductions
- Site visit to City College Process Plant Technology Program
- Community, Transportation & Refinery Updates