

Pinedale Anticline Project Area (PAPA) Operators Annual Planning Meeting
Socioeconomics, Air, and Water
Meeting Minutes

When: Tuesday, August 20, 2013; 8:30 am – 4:30 pm
Where: Rendezvous Room, BLM, Pinedale Field Office, Pinedale, WY
Purpose: Update of data submitted during the past year, targets, and future projects

Attending: BLM: Janet Bellis, Shane DeForest, Regina Lester, Charis Tuers, Merry Gamper, Jeremy Perkins, Tim Zebulske, Joseph Debebe.

SCCD- Kathy Raper, Delsa Allen, Sharon Harrell.

QEP- Kevin Williams, Melissa Cunningham, Ron LePlatt, Charles Prior, Kathryn Fontaine, Lynn Welker, Debbie Stanberry, Carrie Harrington, Joe Redman, Pete Guernsey.

Ultra- Cally McKee, Ericka Tokarz. **USQ-** Kelly Bott, Art Reese. **Linn Energy-** Kevin Wooley, Adele Legerski, Ryan Martin, Daniel Busch, Robin Kisling, Keith Rainey.

Shell- Nancy Feck, Mark Maloney, Jim Sewell, Angela Zikovich, Shanna McGowan, Carolyn **Flemming**, Tracy Moran, Jasmine Allison, Aimee Davison, Carolyn Tucker, Lynn Welker.

WDEQ- Deb Harris, Brain Hall. **AECOM-** Patrick McLean.

USFS-Terry Svalberg. **Newfield-** Kim Clark. **Sen. Barrasso Office-**Omar Etman, Irene Parsons.

WY Outdoor Council- Amber Wilson. **US Rep Lummis -**Pat **Allerman**. **Public-** Tom Curry.

Trout Unlimited- Cathy Purves. **Upper Green River Alliance-** Linda Baker.

CURED- Elaine Crumply.

APPROXIMATE MEETING SCHEDULE (Times are approximations only)

9:00 a.m. **Welcome and Introductions** (Shane DeForest, BLM)

Presentations will be posted on online; printed copies will not be given.

Janet Bellis presented an overview of the Meeting.

9:00 - 9:10 **10-Year Drilling Forecast**

USQ- Cally McKee (Ultra) - 2013- have 6 drilling rigs with no increase in demand for local services anticipated in the next year or two. Currently have 2300 producing wells and approximately 177 employees working in Pinedale. 11 rigs projected by end of 2014 and 19 rigs projected 2021.

Linn-Ryan Martin- 26 locations identified that can be drilled, no new wells 2013-2015, currently have 53 people in Jonah/Pinedale.

*Tom Curry recommended overhead lines should not be used because of sage grouse nesting.

Anschutz-Declined

Yates-N/A

Enterprise-N/A

AIR QUALITY

9:20 IMPROVE/NADP/Lake Chemistry/Tri-State Air Quality (Terry Svalberg, USFS)

- Presented topics included: Air quality related mandates, monitoring deposition, bulk deposition monitors, aerosol monitors, visibility, deciduous and methods for estimating deposition.
- Presented the data from the NADP annual wet deposition trends shown in Gypsum Creek, Pinedale and South Pass- sulfate decreasing, ammonium is increasing until 2010. From 2010 to 2012 ammonium is decreasing at most of the sites. Sulfate has decreased and is down to historical levels since 1984.
- Collected dry and wet deposition at 10,500 ft. in wilderness areas.
- Hobbs and Black Joe-sampled year round every 2 weeks in the summer and every 4 weeks in the winter.
- Have been running statistics on 5 lakes, all are tending to be more acidic. Ross Lake is more acidic, even at the outlet, is the largest lake sampled and is showing more impacts on ANC than any others.

A discussion was held concerning the changes and possible causes of the increase in acidity.

Shane Deforest- acid neutralizing is produced from what?

Comments

- Calcium would improve, sulfur and nitrogen is more acidic and is being pushed down, not enough soil to buffer.
- Sulfates and nitrates have possibly come from snow melt.
- Increase of grasses in high alpine areas can be detrimental to forbs.
- Pollutant load- chemical variables- biological responses
- Changes in water chemistry have been documented.
- Organic mass peaks during fires.
- Nitrates and sulfates can come from Asian dust storms.
- The increase in ammonium is significant in lakes and may be attributed to agriculture.

Deb Harris- In reference to the lakes changes, sources or causes of the changes, does the USFS or other agencies have a plan to correct the issue? If it happened how long does it take a lake to correct the chemistry?

Terry- The chemistry turn around in Ross Lake would be long, currently working with state and others to define the problem. The ammonium is related to agriculture, related to Ross Lake from dust from Idaho and Utah.

Tom Curry- Fertilization is not new to the area so why use it as a reason? Recent change doesn't make sense because it is not a new occurrence. Ozone at these sites- summer ozone levels at monitored sites 50 plus or minus, increase maybe from the oils in the trees. Base level in forest areas is higher. Precipitation has reduced, less snow recharge in the mountains, loss of glaciers,

run off has ceased in areas and drying out here in the past 15 years, should concentrate stuff in lakes, there is not as much run off to flush it.

Is it possible there is something in the atmosphere that changes NO₃ to NH₄ before it gets there?

Terry- Not to my knowledge.

Break

10:00 **General Conformity Update** (Charis Tuers, BLM)

Discussed what Conformity means, which agencies are involved, the conformity requirements and the UGRB ozone non-attainment designation.

Emissions inventory doesn't apply to what has been authorized in the past. It applies to future development. Have 3 years to demonstrate attainment for these areas, if doesn't meet the goal may impact existing sources and operators. DEQ could implement additional requirements and could use the digression to develop an emissions budget for this area and only allow a certain level of emissions.

Tom: BLM could prepare a NEPA document above and beyond the DEQs authorities. The reality is BLM is working a numbers game and are not attacking the problem where it needs to be done.

Charis: disagrees, operators go above and beyond and DEQ has been proactive.

Tom: Producing wells from the past should be considered and included to really reduce emissions. Are wells in the state sections on the anticline are not under the 100 tons per year because it's not BLM authorized? Yes

Air quality is a cumulative impact and suggests BLM look to change the concept of not including it.

*Shane DeForest suggested this would be a conversation and topic to take to the DEQ.

Items exempt from the analysis list will be daily activities BLM that the conducts, such as monitoring, inspections and some oil and gas activities, such as drilling a single well. Analysis will be based on a 100 ton per year for NO_x or VOC annual analysis by authorization.

By the end of 2013 Presumed to conform list will be a legal list, focused on 2 areas; federal actions and activities exempt and non-exempt.

10:00 - 10:10 **Public Questions/Discussion**

Linda Baker- Are flaring, venting included in inventories?

Charis: Flaring, venting, use of gas on site emissions are not always included in inventories depending on operators and conformity regulations. Some are excluded and some are not. If they are not permitted sources BLM deals with them: Traffic, construction equipment, completion rigs and sources that are not permitted with the state.

10:10 JIO Wood Stove Change-out Program (Brandi O'Brien, WDEQ)

Presented a history of the program and information about the 2013 change outs. This will be the last year because there are no more funds available.

10:15 Air Quality in the PAPA (Angela Zivkovich, SWEPI)

Presented on behalf of SWEPI, Ultra and QEP

- 97% drill rig NO_x reduction from 2007-2012. Decline due to increased efficiency, reduction of activity, liquid gathering system helps.
- VOC 61% reduction since 2007.
- Ozone contingency plan will be implemented annually; short term emission reduction plans will be implemented.
- Had one action day 2011 and 2012, zero in 2013. Report efforts to DEQ on any ozone action day.

No questions from the audience.

10:20 PFO Ozone Contingency Plan (Shane DeForest, FM, BLM-PFO)

The BLM was inspired by the Green River Advisory Task Force to implement a plan to contribute to the ozone reduction efforts.

The plan includes implementing the following: personnel will be notified on action days, defer unnecessary travel, no idle policy, delay fueling until after 6 p.m. and keeping office thermostats set at 68 degrees.

Public Questions/Discussion

Tom Curry: has the BLM considered natural gas conversion for vehicles?

Shane DeForest: there have been conversations to discuss this and fleet reductions are in progress.

10:25-10:45 BREAK

10:45 Milestone #3 ROD Requirements and Process (Charis Tuers, BLM)

Presentation topics included: Visibility modeling project history and agency involvement.

Meetings were held with the Operators, DEQ and EPA.

The Emissions inventory submitted from operators were reviewed by DEQ and BLM.

The BLM then consulted with the EPA on this project.

The approved modeling protocol and the emissions inventory was submitted by the operators in November 2012. Milestone must be implemented by March 2015.

Modeling was completed by AECOM; all approved reports are available online.

Final Visibility Milestone as defined in the ROD – “By March 12, 2015, *Model project related visibility impacts will be no greater than zero days over one deciview at Bridger Wilderness.*”

Methods and Discussion (Patrick McKean, AECOM)

Reports will be available online.

Provided a technical presentation to explain how the modeling was conducted, the inputs that went into it and the process.

Topics included:

- Summary of Evaluation of visibility observations at Bridger wilderness area.
- Overview of the modeling technical methods.
- Emissions inventory and additional mitigation activities.
- Emissions processing and modeling system quality assurance review.
- Modeling Results.

Results/Questions:

- CALPUFF model used in SEIS and ROD modeling.
- Showing no significant differences at this time, though there may be some localized events such as fires.
- Period of records starts in 2009 to early 2011 and has been updated through September 2012.
- Consistent trend that nitrate is not a contributor to visibility.
- NOX and SO2 get converted to ammonium nitrate and sulfate in CALPUFF.
- Colder weather- faster conversion.
- All particulate matter was assumed to be fine, not coarse.
- Modeled emissions inventory.
- NOX primary pollutant of concern for visibility modeling. SO2 and PM emissions were also quantified.
- 10 % reduction of completion NOX emissions by Ultra, Shell and QEP.
- Change in visibility to quantify project related impacts is called the delta- deciview.
- NOX conversion to SO2 was discussed in depth as requested by Tom Curry.

Cally McKee discussed the acknowledgement of additional mitigation done by the PAPO board; PAPO gave money for the PXP project lease buyout to reduce emissions. This did not change any project related base case or mitigated inventory numbers.

Questions

A discussion was held concerning the difference in nitrates in March and January and why NO₂ was higher in January. Weather or not this leads to ozone and the impact from fires. This would have to be analyzed in detail.

Patrick was asked to clarify: “if the relative contribution is related to the relative quantity?”

Tom Curry - at what point can it be said the oil and gas industry has negatively impacted visibility in the Bridger wilderness? The information on air quality is not correct and does not support what is obvious. There have been studies done to prove the air quality has decreased in Pinedale in the last 10-12 years.

Patrick: would have to refer to Terry to have the discussion of this topic.

The comparison period starts in 2009.

Linda Baker- the forest service has old photos from the 1980s and from a camera at white pine; comparisons could be done using this.

Kevin Wooley– Linn Energy- in reference to why was all particulate matter being defined as fine versus coarse?

Patrick: could have, it would have been less conservative, more work, would have resulted in a slightly lower impact, to keep things simple and conservative, just assumed all particulate was fine.

Kevin -Can the ratio of fine to coarse be estimated?

Patrick- Cannot due to the varying data from the various sources.

Kevin-The BLM is responsible for declaring when deciview is exceeded.

Shane DeForest would make this determination.

Charis; There is not an agency that looks at a change in deciview and there is no set level to determine. The modeling addressed only PAPA operators’ submissions and cannot exceed one deciview on any one day.

By March 2015 must be in compliance with the milestone #3 visibility goal. 2014 Annual Planning meeting operators must provide an update of progress toward the goal. If they cannot demonstrate that a 10% emissions reduction can be achieved and quantified, may need to look at decreasing the intensity of the development.

Linda- missing the understanding of how to get from % of reduction and emissions to determination of a deciview change or not and how it’s made and who makes the determination?

Charis-addressed question to explain the process. Basing our determination on modeling that was done for this project. FLMs will continue to collect monitoring data; visibility is improving and hopes it will continue.

Linda- change in deciview is a subjective determination made by a human being seeing it, human perspective is lacking, and who makes the determination?

Charis-This is scientifically defined in a number of ways; easiest way to convey to the public is the change in 1 deciveiw is a 10 change in light extinction. Change is barely visibility to the human eye.

A discussion was held concerning visibility and human perception. Human perception is a description; deciview is a quantitative measurement/data.

A quantitative analysis will not guarantee to equal a change in deciview because there is no control over meteorology.

At 2014 annual meeting how will operators present their information? Shane explained the history in getting to the 2014 Planning Meeting, what operators will be doing until then and what information they will present.

The information submitted by operators must be quantifiable and verifiable

The final determination for meeting the visibility milestone will be made in March 2015.

Lunch: 12:00- 1:15

1:20 - 1:40 **ROD implications/decisions** (Shane DeForest, FM, BLM-PFO)

1:40 - 1:50 **Public Question/Discussion**

1:50 - 2:10 **BREAK**

2:10 - 2:30 **WATER QUALITY AND MONITORING**

Operator Water Reports on Water Usage

Linn- Ryan Martin
Shell- Patrick Ashe
USQ- Aimee Davison
QEP-
Anschutz-Declined
Yates-N/A

Linda Baker asked if there was information available about cumulative water use numbers for all operators combined.

2:30 - 2:45 **Update on 2012 Surface Water Sampling** (Kathy Raper, SCCD)

SCCD has been monitoring surface water in the county and on the anticline for 14 years and they currently have 9 sites.

2:45 - 3:00 **Update on 2012 Groundwater Sampling** (Delsa Allen, SCCD)

Presented information on what is tested for and the process. The data collected is as accurate as can be. There is no guarantee the wells will be placed in the VRP program. The DEQ is the regulatory agency. Any water well within 1 mile of an existing or proposed gas well location on the BLM, within the PAPA, can be put into the sampling program.

- If gas well locations are cancelled or denied a well may be removed from sampling. The well can be put back on if a gas well location is proposed within 1 mile of the water well.
- SCCD is not affiliated with monitoring for the DEQ.
- The DEQ is not doing any ongoing monitoring of water wells.
- There is some ground water monitoring sampling at specific VRP sites in the anticline.
- Annual reports of data collected are on the BLM website. There is a short summary that can be accessed.

3:00 - 4:00 **Low-Level Petroleum Hydrocarbon Compounds Study (Part 1) & Next Steps**
(Merry Gamper, BLM-WSO).

- Presented Part 1. (Divided it because it is so complex)
- Final report expected in the next few months.
- Resurveyed all existing water wells on the anticline at the same datum.
- Evaluated all potential contamination sources and potential operational sources.
- Working with the DEQ, operators have provided the funding for the sampling.
- DEQ has authority over high level wells.
- Four groups of wells tested – control, LEL, hydrocarbon impacted and study wells.
- Final Sampling Analysis Plan should be complete in the next 12 month.
- Final LLPHC source evaluation report expected in October with a final numerical model technical report expected for release in September or early October.
- There will be a second meeting in Pinedale to discuss the LLPHC report. Will finalize a low level report and will draft a final ground water monitoring mitigation completion plan. It will take 6 months to get to the final plan to assure accuracy.
- Reasons for delays were relayed; trying to make up for lost time and want to be very thorough.
- Public notice of meeting will be listed and report will be posted at that time.

Open comment period

Linda Baker: Presented information and slides from the Wyoming Water Information Exchange. She suggested the BLM and everyone present investigate cumulative information about produced and injected water. The water belongs to Wyoming residents and

we have a responsibility to think about how all the agencies work together to keep our water clean and abundant.

A discussion was held concerning sources of information, accuracy, types of wells and the amount/types of water produced in the Anticline.

- Hydrocarbon detections in the Jonah should be addressed.
- Methane has been detected at well heads and some have been plugged.
- Some of the wells may be wells other than industrial. So may need to disclose where the information comes from to better clarify what type of well it is.
- The source of all data needs to be clarified and revealed.

Dulsa Allen- requested the data be separated and disclose where data comes from. This can be done and more information will be added on going.

Tom Curry- in reference to the NPL project- is the BLM getting good baseline data on ground water and surface water before the drilling begins?

Shane DeForest- Yes, from the Anticline to the NPL project, we are applying lessons learned and are collecting that information.

Shane DeForest

- In the next few months the LLPHC report will be listed in its final form, there will be additional time dedicated to discuss the LLPHC report at the Annual Planning Meeting.
- Early October date for the next Annual Wildlife Planning meeting, notice will be given.
- December 11-The annual PAPO board meeting will be held in Cheyenne.
- The timeframe for project proposals for PAPO is posted online.
- September 7 is National Public Lands day at the CCC Ponds.
- September 28 is BLM Lands free fee day.
- November 9, 10, 11 DOI National Parks free fee day.

Thanks to everyone for time and participation

Adjourn 4:30pm

Respectfully submitted by Regina Lester, BLM.

