ODH - TENORM rules (M. Snee)

Still working on rules. Going slower than anticipated – originally thought would be done with draft by October, but still working.

Since last meeting, have received inquiries about drill cutting disposal from PA.

C. Butler, OEPA talked about a recent meeting between OEPA and Apex landfill about potential new activity. This may include the construction of a solidification pit for frac water/drill cuttings.

Outreach/Education Activity Update (L. Stevenson, OEPA)

 $Distributed\ final\ copy\ of\ drilling/regulatory\ basics\ fact\ sheet.\ Other\ potential\ topics:$

- Homeowner water safety. T. Tomastik volunteered to initiate something on this.
- Drilling operations L. Stevenson will work with OEPA divisions on initial draft.
- Pipeline construction/requirements—an issue for landowners as well

Media relations (OEPA/ODNR) - No significant activity

Frac water sampling - potential for collaboration? Marcellus Shale Coalition has done sampling, so we may be able to get data from them. T. Tomastik will review information received from PA. We should keep this on the radar, but in the future, as we have limited drilling activity. In the interim, let's focus on parameters list. Is it important to do this if others are volunteering information? (C. Butler). Everything on the media indicates flowback water is "toxic." More concrete data would help address concerns and reduce speculation. Add as agenda item for our next meeting. In the meantime, scope out what we would actually be doing.

NEXT MEETING: February 10th 1:30-4:00 at Ohio EPA.

From: Sent:

To:

Laurie Stevenson Laurie Stevenson@epa.state.oh.us Monday, December 06, 2010 12:26 PM Chris.Perry@dnr.state.oh.us; Heidl Hetzel-Evans; john.husted@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; rick.simmers@dnr.state.oh.us; Aaron Shear; Bill Skowronski; tom.tomastik@dnr.state.oh.us; tom.tugend@dnr.state.oh.us; Aaron Shear; Bill Skowronski; Brian Hall; Charlotte Hickcox; Chuck Lowe; Dan Underwood; Donna Kniss; Eric Adams; Eric Nygaard; Erm Gomes; Fred Snell; Joe Golcochea; Keith Riley; Kristopher Weiss; Lindsay Steve Williams; Stivo DiFranco; Tom Harcarik; Tracy Freeman; Virginia Wilson; Chuck McCracken; Michael Snee; Rebecca Fugitt; Robert Owen; Stephen Helmer Craig Butler

Cc: Subject: Shale Team Meeting on 12/9 - Final Agenda Marcellus Shale12-9final_agenda.DOC Attachments:

Hello everyone. I'm attaching our final agenda for this Thursday's meeting here at Ohio EPA, Central Office. We're

For Ohio EPA SEDO and NEDO, if you can make reservations on your end for videoconferencing equipment, I'll do the

If you have any questions or need anything before Thursday, let me know.

Thanks, Laurie

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Marcellus Shale Meeting OEPA/ODNR/ODH

Thursday, December 9, 2010 2:00 – 4:00 p.m. Ohio EPA Conference Room A, Main Conference Center

AGENDA

Welcome/Introductions C. Butler, L. Stevenson, OEPA Highlights from the ODNR visit to PA ODNR NY Moratorium on Drilling J. Goicochea, OEPA Drilling/Wastewater Updates Drilling activity in the Marcellus/Utica - update T. Tomastik, R. Simmers, ODNR Wastewater/POTW update Mustang Engineering Meeting (pipeline proposal) B. Hall, OEPA L. Stevenson/T. Harcarik Regulatory Update • SB 165/Rules T. Tugend, ODNR TENORM Rules update M. Snee, ODH Drilling permit conditions to protect GW and other sensitive M. Baker, C. Butler, OEPA environments Public Outreach/Education OEPA fact sheet finalized L. Stevenson/All - Ideas for additional fact sheet topics Web site/status update M. Settles, OEPA Media Relations Update OEPA/ODNR

Αli

Next Steps

From: Sent:

Laurie Stevenson Laurie Stevenson stevenson@epa.state.oh.us (Arris Perry@dnr.state.oh.us; Heidl Hetzel-Evans; john.husted@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; rick.simmers@dnr.state.oh.us; tom.tomastik@dnr.state.oh.us; tom.tomastik@dnr.state.oh.us; tom.tomastik@dnr.state.oh.us; Aaron Shear; Bill Skowronski; Brian Hall; Charlotte Hickcox; Chuck Lowe; Dan Underwood; Donna Kniss; Eric Adams; Eric Nygaard; Erm Gomes; Fred Snell; Joe Golcochea; Keith Riley; Kristopher Weiss; Lindsay Tallaferro; Michael Eggert; Mike Baker; Mike Settles; Nancy Rice; Rich Blasick; Steve Saines; Steve Williams; Stivo DiFranco; Tom Harcarik; Tracy Freeman; Virginia Wilson; Chuck Craig Butler

Cc: Subject:

Next Inter-Agency Shale Team Meeting on 12/9 - Draft Agenda Marcellus Shale12-9draftagenda.DOC

Attachments:

Hello everyone. Just a friendly reminder that we have our next inter-agency meeting on Thursday, December 9th here

I'm attaching a draft agenda for your review. If you have any edits, additions, etc., please get these to me by COB Monday and I'll finalize this. Also, due to some conflicts, I am proposing a meeting time of 2:00-4:00 (instead of 1:00-3:00 as originally proposed). If this poses any significant problems, let me know.

OEPA districts, we'll get out more details to you early next week on either a bridge line or video conference option.

Thanks! Laurie

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Marcellus Shale Meeting OEPA/ODNR/ODH

Thursday, December 9, 2010 2:00 – 4:00 p.m. Ohio EPA Conference Room A, Main Conference Center

DRAFT AGENDA

Welcome/Introductions C. Butler, L. Stevenson, OEPA Highlights from the ODNR visit to PA ODNR NY Moratorium on Drilling All Drilling/Wastewater Updates Drilling activity in the Marcellus/Utica - update T. Tomastik, R. Simmers, ODNR Wastewater/POTW update B. Hall, OEPA Mustang Engineering Meeting (pipeline proposal) L. Stevenson/T. Harcarik Regulatory Update SB 165/Rules T. Tugend, ODNR TENORM Rules update M. Snee, ODH Drilling permit conditions to protect GW and other sensitive M. Baker, C. Butler, OEPA environments Public Outreach/Education OEPA fact sheet finalized L. Stevenson/All

Next Steps

- Ideas for additional fact sheet topics

Web site/status update

Media Relations Update

All

M. Settles, OEPA

OEPA/ODNR

From:

Sent: To:

Laurie Stevenson <laurie stevenson@epa.state.oh.us>
Friday, October 22, 2010 11:10 AM
Chris.Perry@dnr.state.oh.us; Heidi Hetzel-Evans; john.husted@dnr.state.oh.us;

Chris Perry@dnr.state.oh.us; Heidi Hetzel-Evans; John.husted@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; rick.simmers@dnr.state.oh.us; tom.tomastik@dnr.state.oh.us; tom.tugend@dnr.state.oh.us; Aaron Shear; Bill Skowronski; Brian Hall; Charlotte Hickcox; Chuck Lowe; Donna Kniss; Eric Nygaard; Erm Gomes; Fred Snell; Joe Goicochea; Keith Riley; Kristopher Weiss; Lindsay Taliaferro; Michael Eggert; Mike Sattles; Randy Bournique; Rich Blasick; Steve Saines; Steve Williams; Tracy Crain Rutler

Cc:

Subject:

Attachments:

Marcellus Shale Meeting/Notes and Revised Contact List Marcellus Shale Workgroup List10-19-10.PDF; Shale Meeting10-19NotesFinal.PDF

Hello everyone. Craig and I would like to again extend our thanks for a productive meeting on Tuesday. I'm passing along the notes from our discussion and an updated workgroup/contact list. If you have any questions or corrections on

We look forward to continuing our discussions at the next meeting, scheduled for December 9th. In addition, we'll be in touch with each other on any respective action items needing more immediate attention before the 9th.

I'm also planning to get our draft fact sheet out here shortly to ODNR and ODH for review/comment under separate

If there's anything else you need, let us know.

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Marcellus Shale

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Marcellus Shale

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OEPA/ODNR/ODH Marcellus Shale Meeting Notes October 19, 2010

Introductions

Revised attendee/workgroup list (see attached)

GWPC Meeting Recap

- T. Tomastik (ODNR). Two major observations from meeting:
 - Heard data regarding flow-back recovery of around 10-15% water out of a total of 2-3 million gallons
 used on average per frac job. Commented that flow-back recovery is not as significant as we've been
 hearing.
 - 2. Heard a speaker on emerging technology for isotope identification of gas contaminants.
- E. Stevenson (OEPA). Two key issues related to water which warrant further discussion in Ohio:
 - 1. Water withdrawal Is this an issue for Ohio from ODNR's perspective? Should we (OEPA) also be looking at this issue from a water quality standpoint, particularly in areas where water could potentially be withdrawn from areas of low flow. How does this change the characteristics of water quality? A couple states at the conference talked about a watershed/regional approach to water withdrawal and approval through their authorization process. What should Ohio be doing to address this issue?
 - 2. POTW disposal is going to be a significant issue for Ohio, as other states look for disposal options. What policy considerations do we need to make at OEPA to protect water resources? Should we be considering some limitations on POTW disposal based on plant capacity, receiving water body, etc? What's our legal authority to do so.

On-site recycling and treatment: Although this is in practice, does not seem to be widespread. How do we encourage more recycling activity, particularly as drilling picks up in Ohio?

ODNR Update

Tom T. commented on the relative pricing for wastewater management options. Current average for Ohio is approximately 5-5.50 for injection in Ohio. It's historically been cheaper to come to UIC disposal in Ohio than to dispose of at POTWs in other states.

Sampling flow-back wastewater. ODNR is considering random sampling of flow-back. In general, flow-back is typically 99.95% freshwater and sand w/some additives, however, there's an interest in knowing more about what constituents are present. If ODNR moves forward on this, there's an opportunity to coordinate with OEPA.

Someone posed the question on additives in production water. Is there a consistent mix that's used industrywide. Tom indicates that is may vary based on service companies. He said sampling may help determine what's coming back and what's detectable. Data related to flow-back wastewater may also help the public better understand this issue and address perception issues related to risk. SB 165 passed in June requires posting MSDS sheets based on invoice for completed jobs. T. Tugend ODNR has some general information on this, however, many MSDS sheets reference to "mixture" w/o CAS numbers, so it's difficult to identify all constituents present in additives. PA's regulations require: frac fluid reporting, permit review, surface casing. OH is ahead of companies in most of these areas.

Marcellus/Utica Drilling Update (M. McCormac, T. Tomastik, ODNR)

2 pending applications in Belmont County (horizontal Marcellus). Will go 5,500 ft., adjacent to each other about 1,300 feet apart. $2^{nd}/3^{rd}$ true long horizontal Marcellus wells. One other well drilled with 17 stage frac.

Utica Shale – Unsure as to amount of water needed for production. But, it's out there. Behind all the current Marcellus leasing is the Utica Shale. Company in Jefferson Cty., Marquette Exploration. Drilling a test well with core – may be 300 feet of Utica. 3 acres with lots of equipment on site. Vertical strat well to collect data. Drilled a well ½ mile away which was plugged (vertical). Will go back to this well to start horizontal drilling. Early in drilling phase.

Strat test in Belmont Cty (C&X). Looking originally for disposal well, but 1.5 million cubic feet of gas showing. Production zone discovered when they were looking for disposal zone. Thinks this will peak interest in more drilling.

David Hill drilling well in Belmont Cty for disposal purposes, but may also hit Utica. 2100-3500 feet down currently in drilling process.

East Resources leasing (Stallion), moving into Ohio first quarter of 2011. No basin is really too deep in PA or other states, but Ohio is appealing. 500 frac tanks to be brought up from Texas. Oklahoma rigs coming after first of year. Chesapeake wants to have 20 rigs operating in Ohio.

Lease activity in Monroe County by Beck Energy.

UIC Update (ODNR, T. Tomastik)

170 active Class II wells (ODNR)

4 applications under review (Richland Cty)., for facility with rail spur. Mt. Simon disposal, 4-5,000 bpd disposal capacity. ODNR is getting weekly inquiries about UIC well installation. Smaller companies asking about on-site disposal. Major players: C&X, D&L Energy.

Q: What are ODNR's projections regarding Ohio's injection capacity, particularly if there's a lot of interest from other states in sending wastewater here? Injection capacity is primarily based on ability to permit wells. Does not see a limit on capacity in Ohio. Western area of state is a good are for future wells, particularly as rail transport becoming an option.

Q: What's the current UIC disposal capacity in PA? 8 wells in PA total. Some limitations geologically in PA with ability for deep well disposal in large volume. 1-2 years to get a permit in PA because they do not have primary. In Ohio (w/primacy) 30-35 days to get a permit. Q: What are the public notice/comment opportunities during ODNR's permit issuance process? Opportunity for public comment. Need is determined based on assessment of threat to human health. Not currently seeing a significantly greater interest from the public in commenting on permitting actions, however, interest could increase with more media attention on shale drilling activities.

Q: What is the problem at UIC wells with lower salinity frac wastewater? Lower salinity water increases pressure at wellhead. Some can mix fluids prior to injection to address this issue. Others don't want to deal with this issue. Requirement to maintain maximum injection pressure and lower TDS can interfere with this.

ODNR indicates that because of the additional burden in handling low salinity TDS wastewaters at UIC facilities, they usually charge a premium for disposal (impact on injection pressures). Larger well diameters help address this issue. 4-5 inch casing -3~% - 4~% diameter injection shaft will help. Larger commercial facilities with more tanks can also mix lower salinity and high salinity wastewater together prior to injection. There are options to address this issue and facilitate more disposal (in the future) of lower salinity wastewater at UIC facilities.

POTW Update (B. Hall, OEPA, DSW)

CWT permit-to-install for Patriot issued by OEPA in August. It's been appealed on two grounds: (1) standard condition (2) 100,000 gpd limit. at max TDS at 50,000 mg/l. This is also the maximum proposed for Warren. City of Warren modification for NPDES permit 600-650,000 gpd requested. NPDES permit for Warren is now out for public comment (comment period ends Nov. 8th). There are monitoring regs. and limits have been driven by concerns regarding PA water quality standards and a drinking water intake level of 500 mg/l. Beaver Falls provides inlet for drinking water supply – drinking water supply area zones require 500 mg/l limit.

Q: If other alternatives exist, is disposal at POTWs something that should be allowed, or under more controlled circumstances? (C. Butler). Maybe between staff in group, we should be considering recommendations to our Directors.

TDS standard on the books for a long time...currently in process of revising this (DSW, B. Hall). Ohio EPA, NEDO commented on how the PA rules are structured. Different chapters, similar to an industrial sector-specific approach. Gas well related. Almost a state variation on categorical standards in PA. Question as to whether Ohio could legally take a similar approach.

Question: Have we done a comparative pricing on disposal? Historically averages have been around 5-5.50 per barrel for UIC in Ohio and around \$9 per barrel in PA. POTW disposal fees in PA were higher than in Ohio. In the past, companies such as Virgin Oil were only charging \$1 per barrel.

Q (C. Butler): As a next step, is there an opportunity to think/talk about how we're going to allow wastewater management to go forward before we're over-run with requests? Key issues: POTW capacity preservation, WQ issues, desire to have UIC be primary disposal option for environmental protection.

Pipeline/Transmission Update (B. Hall, OEPA): Two major pipeline projects in the queue at OEPA. No major updates.

Water use/Withdrawal Discussion (All)

Q: Where do we think water will come from? It is hard to predict this. (T. Tugend) However can make some assumptions on volume given average number of rigs – 280 wells per year - 3 million gallons per well. How large of an area this will spread over with be important in water withdrawal issues. If it's a 2-3 county area, for example, this may have substantial impact. Regional considerations in water withdrawal management. Drilling activity also depends on rig availability – only so many rigs available at any given time. ODNR can investigate

Q: How can we get ahead of the curve on the water withdrawal issue? (L. Stevenson). Per discussion at GWPC meeting, some states have looked at water withdrawal on a regionalized approach, based on watershed. They're looking in particular at low flow areas/conditions and how withdrawal may impact water quality in those areas. We need to discuss this in Ohio.

SB 165 Rule Discussion (All)

ODNR is focusing on two key areas right now related to rules under 165: (1) drilling unit configuration and (2) noise. They need to focus on statutory intent of SB 165; don't want to open up the entire chapter on current rules regarding drilling. Other elements of rules include frac/well construction, horizontal well permits, and general pit design criteria.

B. Hall. On-site lagoons are not legally exempt from Ohio EPA's regulations. We don't, however, necessarily want to implement the PTI requirements if these units are already covered under ODNR's regulations. If there's an opportunity to put some exemption language in ODNR's rules regarding these units, we should consider this.

Question about regulatory status of sediments from pits. Per ODNR, these qualify for a RCRA exemption, while within oil/gas waste stream. ODNR's current rules allows for sediments to be buried on-site. No GW monitoring. Free fluids needs to be removed from the pit and disposed of. Solidification materials added to unit to allow for reuse. (R Simmers, ODNR). Law specifies that site cannot cause contamination.

Q: Is waste managed by a third-party on another site still eligible for RCRA-related exemption? Under consideration by ODNR. Waiting for USEPA's determination. Outside normal treatment activity on-site.

Q. With the increase in size in lagoons, will there be additional requirements for liners, etc.? Current standards for pit liner.

TDS update (B. Hall, OEPA, DSW)

State permit for surface mining on hold/reworking this now. Criteria in general permits to address contaminants such as sulfates, chlorides. Want to develop our own standards in Ohio. USEPA paying close attention to TDS. Several layers to TDS issue. Proposed new general permit for surface mining coming.

TENORM Update (M. Snee, ODH)

ODH is still planning to get their draft rules to members of the workgroup when they are ready. ODH is concerned about radiological materials that accumulate with sludges and the scale build-up in piping. In process of developing rules now. They are seeing more interest from environmental groups. By end of month, advance copy of rules should be available for review/feedback. ODH does not have an issue with radium in deep well injection.

Q: Between ODH and ODNR, what agency primarily responds to citizen concerns/questions regarding private well contamination? This would be primarily handled by ODNR and questions should be referred to them. They have requirements for well testing within certain radius prior to drilling (ODNR requirements). Urban area testing (township with 5,000 or more). Q: Has there been any consideration for expanding testing requirements for rural areas? Not off the table for consideration (J. Husted). BMP testing for methodology on ODNR's Web site. Have lab services for analytical work. Public water supply impacts would be under OEPA's jurisdiction.

Public Outreach/Education Update

Still a collective interest in making connections as agencies to help education the public about drilling, etc.

Bolas Meeting Recap: Around 500 in attendance. Leasing a big component. From ODNR's experience, the following issues are common raised during public forums regarding drilling.

- (1) Water/withdrawal and safety
- (2) Property values
- (3) Infrastructure

Local gov'ts concerned about impacts to infrastructure and withdrawal. PA has done a really good job in outreach (Penn State). Perhaps works with Ohio University. Co-sponsor information sessions for public. Done a really nice job in getting information out to the public. ODNR will get some examples of PA's materials out to the workgroup. (R. Simmers)

ODNR raised issue that people do not maintain water wells and this is a primary problem (bacteria). In addition, water well drilling and construction problems can cause a problem (e.g. natural shallow deposits of gas that get

OEPA has developed a general fact sheet on Marcellus Shale drilling. We will get fact sheet out to ODNR and ODH for review.

M. Settles (OEPA) and H. Hetzel-Evans (ODNR) summarized media inquiries received on the subject. Heidi commented on the recent focus related to trucking issues and spills at drill sites. Also receiving inquiries related to any oil and gas drilling. Questions about leasing. ODNR put together a general info. letter on this from Dir. Logan. This may be good information for a general fact sheet on this topic as well.

Donna Kniss, talked with Asst. Director in WVA. They have authorized no existing dischargers for gas well wastewater at POTWs there. They have a different approach in assimilative capacity determination. Does not expect applications for POTW disposal in near future.

Next Steps:

Continue coordination on rulemaking between ODNR, OEPA and ODH.

OEPA to get draft fact sheet out to ODNR for review.

ODNR to get PA education/outreach materials out to workgroup.

Continue discussion on POTW discharge strategy/options for Ohio and water withdrawal issues.

Next Meeting: December 9th, at 1:00 at Ohio EPA.

From:

Sent: To:

Peggy Hoffer <peggy.hoffer@epa.state.oh.us>
Tuesday, October 12, 2010 7:33 AM
chris.perry@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; Bill Skowronski; Brian Hall;
Bruce Goff; Charlotte Hickcox; Chuck Lowe; Donna Kniss; Eric Nygaard; Erm Gomes; Fred Snell; Jim Sferra; Keith Riley; Laurie Stevenson; Michael Eggert; Mike Settles; Randy
Bournique; Rich Blasick; Steve Saines; Steve Williams; Tim Campbell; Tracy Freeman;
Virginia Wilson; Chuck McCracken; Michael Snee; Stephen Helmer; bair.1@osu.edu
Fwd: Marcellus Shale 10-19FinalAgenda
Marcellus Shale 10-19FinalAgenda DOC; Marcellus Shale Group List.PDF; 8-3-10 Marcellus
Shale Meeting Notes-Final.PDF

Subject: Attachments:

Please see the attachments.

>>> Craig Butler 10/8/2010 1:56 PM >>> Craig Butler, Chief Southeast District Office Ohio Environmental Protection Agency (740) 380-5202 craig,butler@epa.state.oh.us

Ohio Environmental Protection Agency Unless otherwise provided by law,

this communication and any response to it constitutes a public record.

From: Sent:

Craig Butler <Craig.Butler@epa.state.oh.us>

Monday, October 18, 2010 2:07 PM

To:

Monday, October 18, 2010 2:07 PM chris-perry@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; mike.shelton@dnr.state.oh.us; Rich.Milleson@dnr.state.oh.us; rick.simmers@dnr.state.oh.us; Tom.Tomastik@dnr.state.oh.us; Aaron Wolfe; Bill Skowronski; Brian Hall; Bruce Goff; Charlotte Hickcox; Chuck Lowe; Donna Kniss; Eric Nygaard; Erm Gomes; Fred Snell; Jim Sferra, Keith Riley; Michael Eggert; Randy Bournique; Rich Blasick; Steve Saines; Steve Williams; Tim Campbell; Tracy Freeman; Virginia Wilson; Chuck McCracken; Michael Snee; Stephen Helmer; hair 1@gsp. edu.

Subject:

Attachments:

Stephen Helmer; bair.1@osu.edu Marcellus Shale Meeting and Video Conference Marcellus Shale Meeting and Video Conference Marcellus Shale 10-19FinalAgenda.DOC; 8-3-10 Marcellus Shale Meeting Notes-Final.PDF; Marcellus Shale Group List.PDF

All:

Please remember we are scheduled for our second joint agency Marcellus Shale meeting tomorrow from $1-4\,\mathrm{PM}$. As all the Ohio EPA conference rooms were booked, ODNR has graciously found an appropriately sized room with video conference capability. The Ohio EPA, Southeast and Northeast District Office IT staff have the IP addresses necessary to call in to the E-Tech Ohio "room" reserved for this meeting.

The final agenda is attached. I did not get any suggestions for additional topics or the need to eliminate or modify anything listed. So, we will go with this and ask if anyone has any issues to add as we get started.

I've attached an updated staff listing and a copy of last meeting's minutes for your review.

Lot's going on. Lots to share. See you all tomorrow.

Please forward to anyone that I have inadvertently missed or would like this information.

For those coming to ODNR, Fountain Square is made up of nine buildings (buildings A through I) and accessible from

Directions:

2045 Morse Road, Columbus, OH 43229-6693 Take I-71 exit 116 (Sinclair & Morse Road) Drive east on Morse Road Pass Karl Road Pass Northland Park Turn right at Heaton Road light Make an immediate left on access road Turn right at the 2045 ODNR entrance.

A map of the complex is listed at the below link. http://www.dnr.state.oh.us/tabid/10761/Default.aspx

Craig

Craig Butler, Chief Southeast District Office Ohio Environmental Protection Agency (740) 380-5202 Craig butler@epa.state.oh.us

Ohio Environmental Protection Agency

Unless otherwise provided by law, this communication and any response to it constitutes a public record.

From:

Shelton, Mike <Mike.Shelton@dnr.state.oh.us>

Sent:

To:

Craig Butler; Perry, Chris; McCormac, Mike; Milleson, Rich; Simmers, Rick, Tomastik, Tom; Chuck McCracken; jen.house@odh.ohio gov; Michael Snee; Stephen Helme

Cc:

Subject:

RE: Marcellus Shale 10-19 agenda

Craig - how many are expected?

I've tenatively reserved our large conference room in Building D, 3rd Floor, which has video conference capability. Our video conference can connect to another ODNR location (Athens Wildlife office, Old Woman Creek office or our Sandusky Coastal office) - or potentially a non-DNR video conference (though that may take some IT wizardry and I make no promises).

Our large conference room can fit 14 around a table and an additional 20-30 in chairs around the room.

Let me know. -mike.

Mike Shelton Chief, External Affairs Ohio Department of Natural Resources (614) 265-6891 (614) 261-9601 - fax mike.shelton@dnr.state.oh.us

This message and any response to it may constitute a public record and thus may be publicly available to anyone who

----Original Message----

From: Craig Butler [mailto:Craig,Butler@epa.state.oh.us]

Sent: Thursday, October 07, 2010 11:31 AM

To: Perry, Chris; McCormac, Mike; Shelton, Mike; Milleson, Rich; Simmers, Rick; Tomastik, Tom; chuck.mccracken@odh.ohio.gov; jen.house@odh.ohio.gov; michael.snee@odh.ohio.gov; stephen.helmer@odh.ohio.gov

Cc: Laurie Stevenson

Subject: Marcellus Shale 10-19 agenda

To our Marcellus friends at ODNR and ODH;

Attached is the near final agenda for our scheduled October 19th meeting on Marcellus Shale issues. Please review the agenda and comment to Laurie and I if you have any last minute additions or changes.

We do need your possible assistance in finding a room to host the meeting. It appears all of our suitable rooms at the Center are being used. Question to the group is Do any of you

have a room available that would fit the group? More difficult question would you also have video conference capabilities so we could again minimize travel of our district staff for the meeting.

Craig Butler, Chief Southeast District Office Ohio Environmental Protection Agency (740) 380-5202 craig butler@epa.state.oh.us

Ohio Environmental Protection Agency
Unless otherwise provided by law,
this communication and any response to it constitutes a public record.

This message was secured by ZixCorp(R).

From:

Sent: To:

Craig Butler <Craig.Butler@epa.state.oh.us>
Thursday, October 07, 2010 11:31 AM
chris.perry@dnr.state.oh.us; mike.mccormac@dnr.state.oh.us; mike.shelton@dnr.state.oh.us;
Rich.Milleson@dnr.state.oh.us; rick.simmers@dnr.state.oh.us;
Tom.Tomastik@dnr.state.oh.us; Chuck McCracken; jen.house@odh.ohio.gov; Michael Snee;
Stephen Helmer

Stephen Helmer Laurie Stevenson Cc:

Subject: Attachments:

Marcellus Shale 10-19 agenda Marcellus Shale 10-19draftagenda.DOC

To our Marcellus friends at ODNR and ODH;

Attached is the near final agenda for our scheduled October 19th meeting on Marcellus Shale issues. Please review the agenda and comment to Laurie and I if you have any last minute additions or changes.

We do need your possible assistance in finding a room to host the meeting. It appears all of our suitable rooms at the Lazarus Government Center are being used. Question to the group is Do any of you have a room available that would fit the group? More difficult question would you also have video conference capabilities so we could again

Craig Butler, Chief Southeast District Office Ohio Environmental Protection Agency (740) 380-5202 Craig.butler@epa.state.oh.us

Ohio Environmental Protection Agency Unless otherwise provided by law,

this communication and any response to it constitutes a public record.

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Warren Test - Rad Data

Copied from Warren's spreadsheet

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City of Warren Patriot Brine 8-week Study

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6.10	495	344	80	8.3	0.02											***************************************						
29.10	485	304	100	8.1	0.017	White the same of													***************************************			
2.10	434	304	80	8.7	0.018	***************************************													***************************************			
.10	490	336	100	8.4	0.015	***************************************								-			-					
.10	503 506	384	100	9.2	0.013												_					
10	641	348	100	9.1	0.01											***************************************	†				ļ	-
2.10	577	324 404	180	8.7	0.013											***************************************		 		+	ļ	
4.10	672	444	140	8.4	0.013											************************		 	***************************************	+	ļ	-
5.10	595	392	180	8.1	0.008											MANAGEMENT OF THE PARTY OF THE	1		-		ļ	
-		932	120	8.6	0.009	8	27.2											-	***************************************	 		
																						
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	10874	7292	2580	176.7	0.33	56	74.8															,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
200	672	444	180	9.2	0.043	20	27.2	0.3	87.9	0.24	0	0	o	ОТ	otal	0			***************************************			
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Brine	Wk	Conductivity	TDS								total	T			T	AP. 1	T		1	T	Brine	711110	· O-
equency code	,	D, A	W. A	Chloride W. A	pH W	Sulfide T. A	TSS T. A	Alkalinity	Flourides		Phospho us			Brine	Aluminum	0.000				Total			
inits	1	mS	mg/L	mg/L	su	mg/L	mg/L	T. A	T, A	T, A	T, A			frequency cod	Administra	Anamony	Barium	Beryllium	Cadmium	Chromium	Copper	Iron	Le
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.10	3	10.8	7,968	7,500	8.7																		
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	3	17.5	13,650	8,500	10.2	over range																	
0.10	3	23.7	19,100	10,000	8.2	over range																	
1.10	3	33.0	29,720	15,500	7.6	over range							T		+								
2.10	3	58.7	51,360	22,000	9.2	over range									+								
10	4	45.1	34,690	18,500	83	0.446	8980																
10	4	30.9	12,964	15,000	7.4	0.421	860	40.8			9.4												
	4	43.9	21,740	19,000	7.1	0.607	320																
10	4	40.1	13,676	17,500	7.5	0.511	340																•
10	4	31.2	28,780	14,000	7.1	0.334	190																
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	+-	59	54,316	31,000	12.3	0.607	8980	40.8	0	0	9.4	0		0 Total	0.4								
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						en Patrio		40.8	0	0	9.4	0		0 Minimum	0.4 4	DIA/0i	9.6	#DIV/0! A	DIV/0!	0.25	0 11	6.6 ##	4414

Brine Brine wk Conductivity TDS frequency code D, A W, A units mS mg/L Brine Chloride total рΗ Sulfide TSS Alkalinity Flourides Sulfates
T, A T, A W. A W. A W T, A Phosphorus T, A T. A mg/L date 24 or 3hr 2.2.10 3.24.10 3.25.10 3.29.10 mg/L SU T, A mg/L mg/L mg/L mg/L mg/L mg/L 48.4 67,770 21.000 6.8 6.6 0.41 760 47.6 34.3 34,340 20,640 71,150 18,000 0.419 320 21.2 12,000 6.8 0.216 160 450 250 90 58.3 21,500 7.4 over range 7.8 over range 6.9 0.203 59,640 23,860 56.7 24,000 21.2 12,500

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4.6.10		52.8	1,630		8.2				+	+			
4.7.10		84.6				over range	9 270			+			
4.8.10	13	81.1	91,740		7.7	0.315	5	1	 	 			
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4.12.10	1	50 3	54,370		8.1	0.425			 		 		
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tinimum		9	1,630	2,500	6.6	0 254667	226.8421	37.4	#DIV/0!	#DIV/0!		†	#DIV/0!
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[&]quot; SAMPLE WAS DIFFICULT TO FILTER AND THEREFORE DATA MAY NOT BE VALID

Over range - SULFIDE TEST SOME SAMPLES WERE TOO DARK FOR THE TESTING METHOD.

N/A - WERE UNABLE TO RECEIVE TRUCKS ON THESE DAYS DUE TO SEVERE WEATHER CONDITIONS...STUDY HAULTED.

riot F	ren Pat	of War	City											1)	addition	a water a	Brine &	m streams	efore retu	Influent (b	·	7	7	T	F	***************************************
w Influe	D-						***************************************		***************************************	***************************************	HEM	Tec		<u>'</u>	7000000	T								l		
AA HILLIE	- 1		T								new	oil & loil	HEM	total								Chlorida	TDS	TDS	Conductivity	WAS
	l l	l									- 1_	m ox jon o	UE Green	Phosphor	ates	as Sulfa	Flouride	Alkalinity	TSS	Sulfide		Chloride	W. A	W. A		wency code
			Codin	Potassium	annesium	um Im	Calciu	Raw	Strontium	rium	-	gre	us jureasi	T. A		T, A	T, A	T, A	T, A	T. A	W	W, A			us	nits
			Sommi	- 010000001111			e	frequency code	٧		W	IT				mg/L	mg/L	mg/L	mg/L	mg/L	su	mg/L	mg/L	mg/L 24 hr	And the state of t	9 24 or 8hr
				ren es A	g/L	m	mg/L	units	ng/L	/L	m	mg/	mg/L	mg/L		- Inde	1119/2		1			-	8hr	Action to the same according to		0.10
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City of Warren Patriot Brine 8-week study

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# City of Warren Patriot Brine 8-week study

001 Final Effluent

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