From: Trenton Cladouhos <tcladouhos@altarockenergy.com>
Sent: Wednesday, August 20, 2014 3:43 PM
To: Ben Grunewald;Leslie Savage;Bauer, Robert A;robert.worstall@dnr.state.oh.us;r.hoffman@kcc.ks.gov;austin.holland@ou.edu;Gertson, Rod;Jeff Bull;brian.woodard2@chk.com;Nygaard, Kris J;Timothy_Tyrrell@xtoenergy.com;Linda McDonald;dhenry@hilcorp.com;Dellinger, Philip;Platt, Steve;Bates, William;Scott Anderson;Grant Bromhal;Tim Baker;Gerry Baker;Mike Paque;Steele, Edward (GE Global Research);tom.kropatsch@wyo.gov;WRish@hullinc.com
Cc: Rex Buchanan;Rick.Simmers@dnr.state.oh.us
Subject: RE: FIRST CALL "Traffic Light" sub-group...

Greetings!

Very interesting call! Here are some details about my project and what we have done.

AltaRock Energy is a geothermal operator and technology company. We are developing an Enhanced Geothermal System (aka stimulation of a geothermal well) in central Oregon.
This fall, we plan to inject 25,000 bbl/day for about 20 days in order to create a geothermal reservoir in impermeable hot rock.
The project is DOE funded and on federal land, so we had to develop an Induced Seismicity Mitigation Plan (ISMP) and Traffic Light system on our own in 2011.
Check out http://blog.newberrygeothermal.com for 3 years of our public outreach effort, which has be a key part of our ISMP.

Our plan is publically available at:
http://www.altarockenergy.com/projectupdates/Newberry_ISMPlan.pdf.

Our traffic light is on page 56 of the above document. Briefly:
Yellow: Mw>2.0 , no flow increase
Orange: Mw>2.7, PGA>0.014 g, MMI > IV , decrease flow and pressure
Red: Mw>3.5, PGA>0.028 g, MMI > V, Flow back to reduce pressure (no return to green)

The results of our preliminary test in 2012 can be found here:
http://www.geothermal-energy.org/pdf/IGAstandard/SGW/2013/Cladouhos.pdf

I live in Seattle, so should be able to make the October 4 meeting. And make a presentation, if you all would find that useful.

Best regards,

Trenton

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From: Ben Grunewald [mailto:ben@gwpc.org]
Sent: Tuesday, August 19, 2014 10:12 AM

To: Ben Grunewald; Leslie Savage; Bauer, Robert A; robert.worstall@dnr.state.oh.us; r.hoffman@kcc.ks.gov; austin.holland@ou.edu; Gertson, Rod; Jeff Bull; brian.woodard2@chk.com; Nygaard, Kris J; Timothy_Tyrrell@xtoenergy.com; Linda McDonald; dhenry@hilcorp.com; Dellinger, Philip; platt.steve@epa.gov; Bates, William; Scott Anderson; Trenton Cladouhos; Grant Bromhal; Tim Baker; Gerry Baker; Mike Paque; Steele, Edward (GE Global Research); tom.kropatsch@wyo.gov; WRish@hullinc.com
Cc: Rex Buchanan; Rick.Simmers@dnr.state.oh.us
Subject: FIRST CALL "Traffic Light" sub-group...

Hello! The following is a friendly reminder for the first call of the Induced Seismicity sub-group w assessing the Traffic Light decision approach.

The call will be Wednesday, Aug 20th at 2:00pm CT
To join the call, please dial e 866 777 6650 code 405 516 4972

Call Agenda...

1. Introductions:
2. Discussion of what states are currently doing. (Oklahoma can go first)
3. Definition of Traffic light system?
4. Next steps.
5. Oct. GWPC meeting

	Wednesday August 20 2:00pmCT
Leslie Savage (TX, O&G)	NO
Bob Bauer (IL GS)	Yes
Robert Worstall (OH O&G)	Yes
Ryan Hoffman (KS O&G)	No
Austin Holland (OK GS)	no
Rod Gertson (Devon Energy)	no
Jeff Bull (Chesapeake)	yes
Brian Woodard (Chesapeake)	Yes
Kris Nygaard (ExxonMobil)	tentative
Tim Tyrrell (XTO)	no
Linda McDonald (SandRidge)	yes
David Henry (Hilcorp)	Yes
Bill Rish (Hull Risk Analysis Center)	
Phil Dellinger (EPA Region 6)	yes
Steve Platt (EPA Region 3)	yes
Bill Bates (EPA HQ)	Yes
Ed Steele (GE – OGTC)	Yes
Scott Anderson (EDF)	
Trenton Cladouhos (AltraRock)	Yes
Grant Bromhal (NETL)	
Tim Baker (OK O&G)	Yes
Tom Kropatsch (WY O&G)	
Gerry Baker (IOGCC)	
Ben Grunewald (GWPC)	Yes
Mike Paque (GWPC)	

Review of the traffic light decision approach – **Tim Baker** (OK), lead
Leslie Savage (TX O&G)
Bob Bauer (IL Geological Survey)
Robert Worstall (OH O&G)
Austin Holland (OK GS)
Tom Kropatsch (WY O&G)
Rod Gertson (Devon Energy)
Jeff Bull & Brian Woodard (Chesapeake Energy)
Kris Nygaard (ExxonMobil) & Tim Tyrrell (XTO)
Bill Rish (Hull Risk Analysis Center)
Linda McDonald (SandRidge Energy)
David Henry (Hilcorp)
Phil Dellinger (EPA Region 6)
Steve Platt (EPA Region 3)
Bill Bates (EPA HQ)
Ed Steele (GE – OGTC)
Scott Anderson (Environmental Defense Fund)
Trenton Cladouhos (AltraRock)
Grant Bromhal (NETL)