Bobbie Lucero

From: Matthew Birnie
Sent: Tuesday, October 21, 2014 11:10 AM
To: Neal Starkebaum; Paula Swenson; Phil Chamberland; Jonathan Houck
Cc: Bobbie Lucero
Subject: Fwd: CORRESPONDENCE - 20141007 - Ralph E Clark Letter on Geothermal Bacteria
Attachments: ATT00001.htm

Follow Up Flag: Follow up
Flag Status: Flagged

Jerry Smith's response to the concerns raised by Butch.

Bobbie, please place this in the record.

Matthew

Begin forwarded message:

> **From:** "Jerome Smith" <jsmith@pagosaverde.com>
> **To:** "Matthew Birnie" <MBirnie@gunnisoncounty.org>
> **Cc:** "Jerome Smith" <jsmith@pagosaverde.com>, "Russ Forrest" <RForrest@gunnisoncounty.org>
> **Subject: Re: CORRESPONDENCE - 20141007 - Ralph E Clark Letter on Geothermal Bacteria**
>
> Thanks Matthew,
> I've seen the same legitimate concerns expressed many times over the last few years. There is great common confusion regarding geothermal drilling protocols. Mr. Otsuka's concerns are legitimate, but mis-directed. Nothing Pagosa Verde would propose would include fracking. My response to similar concerns, almost always from knowledgeable citizens, has been to contact them directly and go over the science that allows geothermal power development without fracking, chemical injection, or even allowing brine to be exposed to the surface or the atmosphere. Our binary systems are closed loops. Pipes containing the brine brought up from depth, pass through the heat exchanger and are then re-injected into the same aquifer. The brine never leaves the pipes nor is anything additional injected into the aquifer.
>
> Fracking is actually a part of the EGS or Enhanced Geothermal Systems process and used for very deep wells in areas where fluid flow is minimal, but the well bottom is hot. The tracking in those cases increase storage and flow of fluids and is amplified by water injected from the surface. This process was contemplated in Chaffee County and raised the ire of many environmental groups. The Pagosa Verde model recognizes that tracking is both undesirable and unnecessary in sites we develop in Colorado.
>
> I've attached the report I gave to the State of Colorado Water Policy Board. On the second page I note a "Key Consideration" addressing the public confusion among the various geothermal power processes. You might forward this to Mr. Otsuka. I would also be happy to call him and discuss the science and the proposed systems for Gunnison.
>
> We might also consider holding a public geothermal meeting to clarify for your citizens the

Pagosa Verde model. Our model has no carbon emissions, uses no toxic chemicals, does not involve deep drilling or fracking and the process is the only one that has never induced seismicity (mini earthquake tremors).

Thank you for forwarding the letter and letting me in the loop. You or your colleagues can always call on me to talk to concerned citizens. Public understanding is key to our mutual goals.

Jerome C. Smith
President
jsmith@pagosaverde.com<mailto:jsmith@pagosaverde.com>
970 759 6857 (cel)
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On Oct 7, 2014, at 2:52 PM, Matthew Birnie wrote:

Hi Jerry,

I thought I'd pass this on to you as a heads up and to see if you know anything about this issue. The letter is from a local scientist/academic who attends many of our public meetings and will undoubtedly continue to raise this issue as we go through the approval process for our geothermal regs. I hadn't heard this concern today.

Hope all is well,

Matthew

From: Joseph Otsuka
Sent: Tuesday, October 07, 2014 2:47 PM
To: Matthew Birnie; Russ Forrest
Subject: CORRESPONDENCE - 20141007 - Ralph E Clark Letter on Geothermal Bacteria

Matthew and Russ,

Please find the enclosed letter on Geothermal Bacteria. Thank you and have a nice day.

Joseph Otsuka
Administrative Assistant III
Gunnison County Administration
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Gunnison, CO 81230

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