

BOTTLE ROCK POWER COMMUNITY UPDATE

September 2011



A Note from Bottle Rock's General Manager, Brian Harms

Bottle Rock has all required permits in hand to begin construction on the expansion project but that work is being delayed. In the interim, substantial progress is being made on compliance projects and solutions to longstanding technical challenges.

Environmental Quality Progress

Air Quality

Steam is the technical term for water vapor, the gaseous phase of water. In common language it is often used to refer to the visible mist of water droplets formed as this water vapor condenses in the presence of cooler air. About 90% of all electricity is generated using steam as the working fluid, nearly all by steam turbines. At Bottle Rock Power steam is condensed into liquid water at the end of its expansion cycle. The water is re-used in the condensing process over and over again. Any excess water that is not needed in the process is then returned to the geothermal reservoir for re-use. This is one of the 'renewable' aspects of our power production. The steam plumes that you see to the south and west of Lake County are a result of the warm water vapor from cooling towers meeting the cooler off shore air. Bottle Rock's emissions are a small percentage from the geothermal industry. The Lake County Air Quality Management District (LCAQMD) has very stringent limits of 5 lbs per hour H₂S emissions. Commonly, our emissions are less than 1 lb/hour. Prevailing wind direction at the Geysers is from the west and the great majority of geothermal emissions are driven here from plants located in Sonoma County. The emission limits for Power Plants in Sonoma County located adjacent to the Bottle Rock plant are much higher than that of Lake County. Since early spring 2011 the LCAQMD has been measuring baseline emissions between the Sonoma County Plants and BRP's highest well pad as part of our expansion project monitoring requirements. If you would like further information regarding the limits which LCAQMD places on the geothermal industry call, 707-263-7000. If you would like information regarding the limit which Sonoma County allows call, 707-565-2231. Real time data for GAMP station data in the Cobb region can be accessed online at: http://www.lcaqmd.net/GAMP_Selector.htm



West Coleman Pad GAMP Station



Sumps Closure

Fill and compaction of the Francisco Sump is complete. West Coleman Sump compaction tests are complete for this stage of closure in 2011. Work will begin in 2012 to complete the closure of the West Coleman sump.

Francisco Sump West Coleman Sump





Steam line descending from the West Coleman Pad

Good Neighbor Practices

Bottle Rock’s good neighbor practices include attention to neighbor concerns. Noise level, visual impact, air pollution including dust are among those concerns. Noise levels at the plant are within permitted requirements. BRP has recently replaced and or repaired several pieces of equipment that has had the additional benefit of further noise reduction. Visual impact and land scarring from our operations are minimized and future pads are engineered for minimal impact. Bottle Rock’s efforts to reduce dust include surfacing of roadways and watering during earth moving operations. Vehicle and equipment emissions are recorded and reported annually to the California Air Resources Board.



Greg Thomas with one of our new Oxidation Air Blowers

Operations

Bottle Rock employees have had 163 days without a recordable injury. BRP has successfully operated without any major incidents or malfunctions in 2011.

Lenticular clouds over Mt. Konocti as seen from the West Coleman pad



www.BottleRockPower.com

Please visit our website and learn more about Bottle Rock Power as well as geothermal energy. Community updates, notices and job openings will be posted as they become available.

High Valley Road Resurfacing

The remaining portion of High Valley Road required to be resurfaced by our Road Maintenance Plan was completed in September. A Lake County contractor and employees performed the work.

High Valley Road after resurfacing.



Contributions to our Community

Bottle Rock Power is proud to contribute to our community. This summer we contributed to Kelseyville High School sports, Konocti Youth Soccer League, Coyote Valley Elementary PTO, Boy Scouts Program –Wreaths Across America and the Soper Reese Community Theatre..

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