

AGENDA

SEISMIC MONITORING ADVISORY COMMITTEE

November 13, 2018 @ 9:30 a.m.
Calpine Geothermal Visitors Center
15500 Central Park Road, Middletown

Call In: 1-888-449-6492; Participant Passcode: 226083

- I. Introductions
- II. Approval of SMAC minutes from May 14, 2018 meeting.
- III. Calpine - Craig Hartline
- IV. Update of SE Geysers pipeline operations – Ed Voge
- V. Report on DOGGR – Amar Rao
- VI. Report on LBNL – Kurt Nihei (Unable to attend)
- VII. Summary of Seismic Data from USGS Network - Lind S. Gee
- VIII. Report on US Geothermal – Western Geo Power – Scott Nichols
- IX. Santa Rosa Geysers Operations – Mike Sherman
- X. Anderson Springs Community Service District – Meriel Medrano
- XI. Cobb Area Water – Ben Murphy
- XII. Middletown Community Input – Linda Diehl Darms
- XIII. Anderson Springs Public Input – Jacquelyn Bartlett
- XIV. Cobb Area Public Input – Robert Stark
- XV. Schedule Next Meeting for Monday, May 13, 2019
- XVII. General Public Input
- XVIII. Adjournment

SEISMIC MONITORING ADVISORY COMMITTEE (SMAC)

Monday, May 14, 2018 @ 9:30 a.m.
Calpine Geothermal Visitors Center
15500 Central Park Road
Middletown, California

DRAFT MINUTES

Meeting called to order by Jan Coppinger, Committee Chair (Lake County Special Districts) at 9:40 a.m.

Minutes were recorded by Coppinger and transcribed to Draft Minutes. Coppinger initiated introductions.

Present: Jan Coppinger, Committee Chair (Lake County Special Districts), Craig Hartline (Calpine), Les Drake (Northern California Power Agency), Joe Austin (Division of Oil, Gas & Geothermal Resources), Amar Rao (Division of Oil, Gas & Geothermal Resources) Bill King (Calpine), Jacquelyn Bartlett (Anderson Springs), Linda Diehl-Darms (Middletown), Ben Murphy (Cobb Area Water), Meriel Medrano (Anderson Springs Community District), Robert Stark (Friends of Cobb), Dennis Walsh (Cobb resident), Joan Clay, Cheryl Engels and Donna Taylor (Anderson Springs Residents)

- I. **Nov. 13, 2017 Meeting Minutes for Approval: Jan Coppinger**
Jan Coppinger presented the Draft Minutes for approval. The minutes were approved by consensus.

- II. **Anderson Springs Report: Jacquelyn Bartlett**
Bartlett reports that homes are being built and the community is more engaged than before the fire. Most residents she spoke with were concerned about the most recent seismic event of May 9th.

- III. **Friends of Cobb: Robert Stark**
Stark reported that other than the usual routine shaking, there was nothing to report.

- IV. **Middletown Community Input: Linda Diehl Darms**
Diehl Darms reported that the May 9th event was felt in Middletown.

- V. **Northern California Power Agency (NCPA) Report: Les Drake and Ed Voge**
NCPA Slide Deck Presented on Reporting Period 10/01/2017 – 03/21/2018
 - a) Historical SE Geysers Effluent Pipeline Deliveries to The Geysers;
 - b) Southeast Geysers Effluent Pipeline Delivery: Average Delivery Rate = 7.14 MGD;
 - c) Daily SEGEP Delivery: NCPA and Calpine;
 - d) The Geysers – Historical Seismic Activity;
 - e) Southeast Geysers – Historical Seismic Activity: Magnitude >1.5, 2002-2018.

- VI. **Seismic Data from USGS Network: Not Present**

- VII. **Calpine Corporation: Craig Hartline**
Calpine Slide Deck Presented on Reporting Period 10/01/2017 – 03/30/2018
 - a) Status of Seismic Monitoring Networks;
 - b) LBNL Seismic Monitoring Network;
 - c) USGS / Northern California Seismic Network;

- d) Strong Motion Stations;
- e) Field-wide Seismicity Analysis;
- f) Synchronized Field-wide Water Injection and Seismicity Analysis;
- g) Community Hotline;
- h) Strong Motion Analysis;
- i) Regional Seismicity Analysis;
- j) Water Injection Goals and Modifications;
- k) 3D Structural Model Building;
- l) Fault/Fracture Analysis;
- m) Additional Seismic Monitoring and Research.

VIII. Report on US Geothermal/Western Geo Power: Not Present.

Reported that Western Geo Power has been purchased by ORMAT Technologies

IX. Report by Lind Gee Seismic Data: Not Present.

X. Anderson Springs Community Service District, Meriel Medrano

Cheryl Engels and Donna Taylor described the May 9th event. Concern was raised about the new building codes requiring homes be secured more stringently than previously and how they would hold up during a large seismic event. Prior to the fire, homes were able to move with the earth motion but being secured may result in worse cracks and damage. Homes that are near the creek and must be built on tall piers are also cause concern for seismic activity. Coppinger will ask the Building Department to research and report on this concern.

XI. Cobb Area Water District, Ben Murphy

Murphy reported that the district continues to work toward the consolidation of the water districts and that new distribution pipe is planned.

XII. Report on DOGGR: Joe Austin – Joe announced that he is retiring at the end of June, 2018. He introduced his replacement Amar Rao. Joe stated that it has been an honor to be a part of the cutting edge technology utilized and reported by Craig Hartline in the seismic monitoring and study.

X. Santa Rosa Geysers Operation, Mike Sherman

Sherman reported that coordination with Santa Rosa Geysers Operation has been working very well. No issues to report.

Next meeting: The next SMAC meeting is set for **Monday, Nov 12, 2018, 9:30 am** at the Calpine Geothermal Visitors Center. Meeting was adjourned by Coppinger at 11:30 AM.

Meeting Agenda and Full Presentations are available online at:
<http://www.geysers.com/smac.aspx>