

Gary Snellgrove

From: Bruce Martin <BMartin@texasbrine.com>
Sent: Monday, September 19, 2016 6:38 AM
To: Gary Snellgrove
Cc: Richard Ieyoub; Gary Ross
Subject: Follow Up to 9/12/16 Meeting

Gary:

As discussed at our meeting with you, Commissioner Ieyoub, and Asst. Commissioner Ross, below you will find a summary of TBC's understanding of the status of the various actions items presented originally at the meeting with your office on 8/3/16 focused on defining the wind down of response activities associated with the Bayou Corne (BC) sinkhole incident:

1. **No Further Action-At This Time (NFA-ATT) Recommendation for Areas 3 & 6:** As previously mentioned, TBC feels that it has submitted the information requested by Commissioner Ieyoub in his 6/28/16 letter. This combined with the fact that no Observation Relief Wells (ORWs) continue to vent in or around Areas 3 & 6 which includes the Sportsman's Paradise neighborhood in BC supports approval of the NFA-ATT for these areas and that the voluntary evacuation order remaining for these areas should be lifted as there is no serious threat to public safety.
2. **Indoor and Area Air Monitoring:** Per Assumption Parish OEP, LDNR, and LDEQ approval, area air monitoring has been scaled back to only area air monitors and indoor LEL/H2S monitors in inhabited homes in the Sportsman's Paradise neighborhood. TBC believes that with NFA-ATT approval for Areas 3 & 6 and subsequent lifting of the remaining voluntary evacuation order for these areas, both area and indoor air monitoring should cease. It should be noted that there have been no positive indoor or outdoor detections of LEL or H2S in almost four years of monitoring. As mentioned previously, upon NFA-ATT approval for Areas 3 & 6, TBC will shut down the indoor air monitoring system but will provide residents in the Sportsman's Paradise neighborhood with two calibrated sets of indoor LEL/H2S.
3. **Area Subsidence Monitoring:** TBC believes that area monitoring over the past year indicates that it is similar and not in excess of regional area subsidence being experienced in south Louisiana remote from the sinkhole. TBC also believes that as a result of this and overall sinkhole stabilization, the area water level and inclinometer system as reported by Respec's VDV website is no longer needed. TBC, however, does recognize the potential for additional subsidence in the area immediately adjacent to the sinkhole. As previously recommended, TBC believes that only semi-annual surveys of the top of the sinkhole containment berm through the end of 2017 are needed going forward and area subsidence monitoring should be stopped and the water level/inclinometer system should be shut down and decommissioned. Manual water level gauges have been installed to allow weekly reporting of sinkhole and Bayou Corne water levels to LDNR.
4. **Seismic Monitoring:** TBC believes that the shallow seismic geophones and monitoring network and the Nanometrics reporting process can be shut down and the upper geophone in the G-01 array can be used as a substitute for shallow MEQ monitoring. TBC feels this change is appropriate given that Very Long Period (VLP) events have not been detected for almost three years. In addition, as a result of the OG3 cavern now being full of sediment and the stabilization of the sinkhole bottom and sides, additional VLP events are not expected and would be considered highly unlikely. TBC has asked its consultant if the G-01 geophones can be used to monitor for VLP events, but at present, this remains unknown. TBC also recommends that the need for continued deep seismic monitoring be evaluated in 4Q16 and provided to LDNR.

5. MRAA Groundwater (GW) and Sinkhole Water Management: It's TBC's understanding that LDNR and LDEQ will continue to make every effort to expedite the review of the MO2 GW work plan and MO3 sinkhole water work plan so that TBC can complete the assessment against RECAP standards as quickly as possible. TBC believes it has submitted GW capture zone information to LDNR that should allow it to approve temporary suspension of MRAA GW pumping from the Oxy Geismar Grand Bayou water wells for the time it takes to complete this RECAP assessment. TBC continues to evaluate and pursue alternatives for on-going sinkhole water management.
6. OG1, OG2, and OG3A Pressure Monitoring: TBC is committed to providing weekly updates on well pressures for these three wells as a substitute for the continuous data currently being provided by the Respec VDV website.

TBC believes that the foregoing recommendations provided to LDNR are both timely and prudent, and plans to proceed to implement these recommendations accordingly unless your office has objections to or suggestions for better or alternative recommendations. We are available to discuss any aspect of these recommendations or LDNR alternatives to provide a working platform going forward and ease any uncertainty surrounding a proper close of this entire matter.

Thanking you and with best wishes, I remain

Sincerely,
Bruce

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