

# INCIDENT ACTION PLAN

Be brief and concise with your entries

<b>Location</b> Bayou Corne Sink Hole	<b>Control Level</b> Company Supervisory	<b>Operational Period</b> From 11/6/13      To 11/7/13
---	---	---

<p><b>1.0 SITUATION</b> Disease, community, environment</p> <p>PROMPTS: Weather, disease trends, Resources, Hazards &amp; safety</p> <p>REFERENCE: Maps, weather reports, Sitreps, appreciation, warnings, alerts</p>	<p><b>CURRENT</b> Mostly sunny</p> <hr/> <p><b>PREDICTION</b> Partly cloudy skies during the morning hours will give way to occasional showers in the afternoon. 60% chance of precipitation. High Temperature near 83.</p>
<p><b>2.0 OBJECTIVES (or MISSION)</b></p> <p>PROMPTS: Time &amp; space</p> <p>REFERENCE: Appreciation – control options, courses open to disease</p>	<p><b>CURRENT</b></p> <p><b>Objective 1</b> - Demonstrating sinkhole containment and determining if additional sinkholes could form.</p> <p><b>Objective 2</b> - Locating and mitigating the risk posed by the presence of shallow gas.</p> <p><b>Objective 3</b> - Confirming the broader stability of the Napoleonville Salt Dome.</p> <p><b>Current Actions:</b> <b>(For planning purposes only, all activities are subject to change.)</b></p> <p><b><u>ORW, MRAA, and PMW wells</u></b></p> <ul style="list-style-type: none"> <li>- Conduct daily well readings and flare maintenance</li> <li>- Continue monitoring drawdown test at OGRW 1.</li> <li>- General maintenance on ORWs</li> <li>- Begin drilling at MRAA-02S</li> <li>- Continue dewatering ORW-10 to enhance gas flow</li> <li>- Reroute gas collection lines in the vicinity of MRAA-4 pad to accommodate larger pad</li> </ul> <p><b><u>Air Monitoring/Under-slab Ventilation</u></b></p> <ul style="list-style-type: none"> <li>- Conduct ventilation system inspections</li> <li>- Plan to turn vent system back on at 1465 Sauce Piquante (previously shut down due to subsurface water)</li> </ul> <p><b><u>Containment/ Roads/ Sinkhole</u></b></p> <ul style="list-style-type: none"> <li>- Daily berm inspections</li> <li>- Expand MRAA-4 pad to accommodate MRAA-4D well</li> <li>- Expand MRAA-5 pad to accommodate MRAA-5D well</li> <li>- Continue transferring water from surrounding swamp to sinkhole</li> <li>- Continue deploying additional boom south of the sinkhole</li> </ul> <p><b><u>Survey/Sampling</u></b></p> <ul style="list-style-type: none"> <li>- Monitor bubble sites</li> <li>- Daily settlement plate survey around berm</li> <li>- Weekly settlement plate survey at bubble site 47</li> <li>- Survey points on south berm</li> <li>- Measure water levels on MRAA and industrial wells</li> </ul>

	<ul style="list-style-type: none"> <li>- Continue monthly sampling event on MRAA wells</li> </ul> <p><b><u>Tomorrow's Activities</u></b></p> <ul style="list-style-type: none"> <li>- Continue under-slab pressure monitoring</li> <li>- Conduct daily well readings and flare maintenance</li> <li>- Continue pump tests</li> <li>- Daily settlement plate survey around berm</li> <li>- Continue installing MRAA wells</li> <li>- Continue monthly MRAA sampling event</li> </ul> <p><b>Sinkhole Activity – Code 2</b></p>
<p><b>3.0 EXECUTION</b> add safety information as appropriate</p>	
<p><b>GENERAL OUTLINE</b></p> <p>PROMPTS: Strategies &amp; tactics (current/proposed/alternate)</p> <p>REFERENCE: Appreciation, Control Options</p>	<p><b>Safety Information: See Attached Safe Work Rules Reference IAP dated 8/9/12</b></p> <p><b>Additional to our Safe Work Rules for this project we are adding the awareness of insects, reptiles and animals.</b></p> <p><b>Inspect location for flammability</b></p> <p><b>Daily Safety Meetings</b></p> <p><b>PPE Required on site: Respirator w/ VOC Cartridge, Gloves for sampling, eye protection, life preservers, hearing protection.</b></p>
<p><b>GROUPINGS</b></p>	<p><b>NA</b></p>
<p><b>TASKS</b> Including PR &amp; Media</p>	<p><b>Same as above</b></p>
<p><b>COORDINATING INSTRUCTIONS</b></p> <p>PROMPTS: Timings, routes, assembly areas, staging areas</p>	<p><b>Texas Brine Grand Bayou Facility will be used as staging area.</b></p>
<p><b>4.0 ADMINISTRATION</b> (Logistics support)</p> <p>PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)</p>	
<p><b>SUPPLY</b></p>	<p><b>NA</b></p>

WHO, WHAT, WHERE, WHEN of resources not readily available	
<b>GROUND SUPPORT</b> Transport of personnel, traffic mgt, refuelling, mechanical repair/maintenance	<b>NA</b>
<b>COMMUNICATIONS</b> Installation, maintenance, technical advice	<b>Cell Phone &amp; Landline Communications:</b> <b>Kenneth Blanchard – Area Manager – [REDACTED] ([REDACTED])</b> <b>kblanchard@texasbrine.com</b> <b>Scott Borne – Facility Manager – [REDACTED] ([REDACTED])</b> <b>sborne@texasbrine.com</b> <b>Joel Miller, PE – Consultant – [REDACTED] ([REDACTED]) joel.miller@cox-</b> <b>internet.com</b> <b>Bruce Martin – Operations/PR – [REDACTED] ([REDACTED])</b> <b>bmartin@texasbrine.com</b> <b>Mark Cartwright – Technical/Engineering – [REDACTED] ([REDACTED])</b> <b>mcartwright@unitedbrine.com</b> <b>Scott Whitelaw – Environmental/Safety – [REDACTED] ([REDACTED])</b> <b>swhitelaw@tum.com</b>
<b>STAGING AREA/ FCP</b> Setting up, communications, staffing	<b>Texas Brine Grand Bayou Facility</b> <b>1301 Hwy 70 South, Belle Rose, La 70341</b>
<b>5.0 ADMINISTRATION (Logistics services)</b>	
PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)	
<b>FACILITIES</b> Security, waste, cleaning	<b>NA</b>
<b>CATERING</b>	<b>NA</b>
<b>OH&amp;S/MEDICAL</b> Medical plan, first aid plan	<b>Call 911</b>
<b>FINANCE</b>	<b>NA</b>
<b>TRAVEL</b>	<b>NA</b>
<b>INDUCTION/ TRAINING</b>	<b>NA</b>

ACCOMMODATION	NA
<b>6.0 CONTROL, COORDINATION &amp; COMMUNICATION</b>	
<b>CONTROL &amp; COORDINATION STRUCTURE</b>  REFERENCE Structural Chart	<b>Plant Management Supervision / Contractor Work</b>
<b>COORDINATION &amp; LIAISON</b>  Local knowledge, police, agency reps, emergency mgt reps	NA
<b>COMMUNICATIONS</b>  PROMPTS Communications structure, operational comms plan, information mgt	<b>Plant Management – Contractor Communication via Cell Phone</b>

<b>EXTRAS</b>	
<b>Attachments</b> PROMPTS: maps, weather, organisational charts, resources, comms diagram	<b>Current Weather Safe Work Rules</b>
<b>Plan developers</b> PROMPTS PO, Logs Mgr, Controller	NA
<b>Approval</b> Controller, Ops Director	<b>TBC Company Rep: William Booher</b> <b>FOSC:</b> <b>SOSC:</b> <b>POSC:</b>

## Belle Rose, Louisiana, United States

**Today's Forecast:** Wednesday, 6 Nov 2013

**83°F**

**62°F**

**Sky Conditions:** PM Showers

**Sunrise:** 6:22 AM **Sunset:** 5:13 PM

**Wind:** E (99°) @ 9Mph

**Precipitation Probability:** 60%



[View your complete Local Weather »](#)

## Extended Forecast [Full 10-Day Forecast »](#)

Thursday 7 Nov 2013	Friday 8 Nov 2013	Saturday 9 Nov 2013	Sunday 10 Nov 2013
Mostly Sunny	Partly Cloudy	Partly Cloudy	Partly Cloudy
<b>70°F</b> <b>46°F</b>	<b>69°F</b> <b>50°F</b>	<b>77°F</b> <b>59°F</b>	<b>78°F</b> <b>61°F</b>

## Detailed Forecast

### Today:

Partly cloudy skies during the morning hours will give way to occasional showers in the afternoon. Warm. High 83F. Winds E at 5 to 10 mph. Chance of rain 40%.

### Tonight:

Considerable cloudiness with occasional rain showers. Low 62F. Winds NNE at 5 to 10 mph. Chance of rain 60%.

### Tomorrow:

Plenty of sun. Highs in the low 70s and lows in the mid 40s.

## Site Safety Plan for Sinkhole and Surrounding Area

Seismic Code	Seismic Activity	Sinkhole Access	Berm Road Access	Work Allowed
1	Minimal to no seismic activity around/below sinkhole; 10 or fewer of the sharp seismic signals associated with rock movement, called mini-earthquakes (MEQs) or the longer signals associated with gas or liquid movement, called Very Long Periods (VLPs) within 24-hour period; allows work on sinkhole and inside berm area to continue	<ul style="list-style-type: none"> <li>Approved<sup>1</sup> work allowed only in designated areas of sinkhole. Some areas may be restricted due to unsafe conditions (e.g., leaning trees). Sinkhole grid system shown in Figure 1 will be used to define restricted areas for individual work activities.</li> <li>All vessels must have at least 2 persons. Workers must wear approved PFDs. No work allowed after sunset. Safety boat on standby.</li> </ul>	Access allowed on all berms and roads unless an area is physically barricaded.	Approved work allowed in unrestricted areas. Work area must be cleared of hazards and a Work Permit issued before start.
2	Indicates some increased seismic activity around/below sinkhole but not at a level that indicates imminent threat of sloughing or movement below sinkhole (10 to 50 MEQs or VLPs in 24 hours)	<p>Code 1 requirements plus:</p> <ul style="list-style-type: none"> <li>Each vessel inside designated sinkhole area (see Figure 2) must have a designated shoreline watch who is in constant radio communication with vessel.</li> </ul>	Access allowed on all berms and roads unless an area is physically barricaded.	<p>Code 1 requirements plus:</p> <ul style="list-style-type: none"> <li>Each work activity must have a designated person with means to warn all workers of unusual activity on sinkhole.</li> </ul>
3	Indicates seismic activity has elevated to a point similar to what has been seen in past monitoring prior to a sloughing on the shore or movement beneath sinkhole (More than 50 MEQs or VLPs in 24 hours)	<p>Code 1 requirements plus:</p> <ul style="list-style-type: none"> <li>Each vessel inside the defined containment berm (see Figure 2) must have a designated shoreline watch who is in constant radio communication with vessel.</li> </ul>	All berm roads are closed except the north berm from the TBC Access road to Rig Road (unless restricted for non-seismic reasons). All other berms open only to UTVs for personnel doing approved work. Anyone on a UTV must have a radio, air horn, and approved PFD.	<p>Code 1 and 2 requirements plus:</p> <ul style="list-style-type: none"> <li>Work is allowed on a case by case basis as determined by TBC Operations:</li> </ul>

- All site work must be approved by TBC Response Operations.
- The Texas Brine access road from Highway 70 to Pad 10 is not considered part of the designated containment berm for purposes of this document.
- Codes are set by Assumption Parish Office of Emergency Management



# Site Safety for Sinkhole and Surrounding Area

In an effort to provide for a safe work environment in and around the Sink Hole, this procedure has been put in place to inform workers of their allowed Work Areas. This procedure is only guidance and should not exclude any other observation or safety precautions in place that may cause any danger to anyone. All workers entering the Texas Brine facility should be informed of the risks that are posed by this ongoing event.

This system has been developed using a Code System and is defined as follows:

## Code 1:

---

Is an all clear, with restriction to OXY pad 3 and the North pad area as indicated in the map below due to the concerns raised by Itaska.





## Code 2:

---

Restrict all activity from inside the Berm, but not the Berm itself or outside; recommend that all operations in the immediate vicinity of the sinkhole be halted immediately. The Inside Berm is defined as indicated on the map below in red.





## Code 3:

---

Restrict activity from inside and on the Berm, no work activity shall occur until Code level has been changed to allow. Continued monitoring of the berm for cracks and venting wells located adjacent to the berm. At this code level immediate notification shall be made of any changes that occur on sinkhole, swamp around sinkhole, or any changes to berm area. The Berm is defined as indicated in yellow on the map below.



## Communication:

---

All workers working in conjunction with this ongoing event shall be informed of these codes and communication protocol developed to inform everyone when codes may change at any time.