

# INCIDENT ACTION PLAN

Be brief and concise with your entries

<b>Location</b> <b>Bayou Corne</b> <b>Sink Hole</b>	<b>Control Level</b> <b>Company Supervisory</b>	<b>Operational Period</b> <b>From 1/17/14</b> <b>To 1/18/14</b>
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<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> Sunshine</p> <hr/> <p><b>PREDICTION</b> Partly cloudy. 0% chance of precipitation. High Temperature near 59.</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, CPT and PVW wells</u></b></p> <ul style="list-style-type: none"> <li>- Conduct daily well readings and flare maintenance</li> <li>- Continue to depressurize ORW – 54 through separator so that wellhead can be replaced.</li> <li>- Monitor Bubble site 56</li> <li>- Dewater ORWs 22 &amp; 32</li> <li>- Complete grouting passive vent well PVW-03</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> </ul> <p><b><u>Containment/ Roads/ Sinkhole</u></b></p> <ul style="list-style-type: none"> <li>- Daily berm inspections</li> <li>- Continue hauling and placing sand for construction of new south berm</li> <li>- Continue clearing/chipping trees and continue placing sand for access road on Triche property</li> <li>- Mobilize marsh excavator to Pad 9 to begin clearing path to ORW-57</li> <li>- Place sand/limestone mixture on low portion of the old south berm (6" lift near location R12)</li> </ul> <p><b><u>Sampling/Surveying/Instrumentation</u></b></p> <ul style="list-style-type: none"> <li>- Continue monthly MRAA sampling event</li> <li>- Sinkhole wagon wheel survey</li> <li>- Survey south berm rods</li> </ul> <p><b><u>Tomorrow's Activities</u></b></p> <ul style="list-style-type: none"> <li>- Continue ventilation system inspections</li> </ul>

	<ul style="list-style-type: none"> <li>- Conduct daily well readings and flare maintenance</li> <li>- Continue depressurizing ORW – 54</li> <li>- Conduct daily berm inspection</li> <li>- Monitor Bubble site 56</li> <li>- Continue dewatering select ORWs</li> <li>- Continue placing sand for new south berm</li> <li>- Continue placing sand for access road on Triche property toward ORWs 55 and 56</li> <li>- Continue drilling and installing PVWs</li> <li>- Continue clearing access road to ORW-57</li> </ul>
<b>Sinkhole Activity – Code 1</b>	
<b>3.0 EXECUTION</b> add safety information as appropriate	
<b>GENERAL OUTLINE</b>  PROMPTS: Strategies & tactics (current/proposed/alternate)  REFERENCE: Appreciation, Control Options	<p style="text-align: center;"><b>Safety Information: See Attached Safe Work Rules Reference IAP dated 8/9/12</b></p> <p style="text-align: center;"><b>Additional to our Safe Work Rules for this project we are adding the awareness of insects, reptiles and animals.</b></p> <p style="text-align: center;"><b>Inspect location for flammability</b></p> <p style="text-align: center;"><b>Daily Safety Meetings</b></p> <p style="text-align: center;"><b>PPE Required on site: Respirator w/ VOC Cartridge, Gloves for sampling, eye protection, life preservers, hearing protection.</b></p>
<b>GROUPINGS</b>	<b>NA</b>
<b>TASKS</b> Including PR & Media	<b>Same as above</b>
<b>COORDINATING INSTRUCTIONS</b>  PROMPTS: Timings, routes, assembly areas, staging areas	<b>Texas Brine Grand Bayou Facility will be used as staging area.</b>
<b>4.0 ADMINISTRATION</b> (Logistics support)  PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)	

<b>SUPPLY</b> WHO, WHAT, WHERE, WHEN of resources not readily available	<b>NA</b>
<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 – (██████████) (██████████)</b> <b>kblanchard@texasbrine.com</b> <b>Scott Borne – Facility Manager – (██████████) (██████████)</b> <b>sborne@texasbrine.com</b> <b>Joel Miller, PE – Consultant – (██████████) (██████████) joel.miller@cox-</b> <b>internet.com</b> <b>Bruce Martin – Operations/PR – (██████████) (██████████)</b> <b>bmartin@texasbrine.com</b> <b>Mark Cartwright – Technical/Engineering – (██████████) (██████████)</b> <b>mcartwright@unitedbrine.com</b> <b>Scott Whitelaw – Environmental/Safety – (██████████) (██████████)</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</b> (Logistics services)  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>	
CONTROL & COORDINATION STRUCTURE  REFERENCE Structural Chart	<b>Plant Management Supervision / Contractor Work</b>
COORDINATION & LIAISON  Local knowledge, police, agency reps, emergency mgt reps	NA
COMMUNICATIONS  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:** Friday, 17 Jan 2014





**59°F**  
**32°F**

**Sky Conditions:** Partly Cloudy  
**Sunrise:** 7:00 AM **Sunset:** 5:28 PM  
**Wind:** NW (315°) @ 13Mph  
**Precipitation Probability:** 0%



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

<b>Saturday</b> 18 Jan 2014	<b>Sunday</b> 19 Jan 2014	<b>Monday</b> 20 Jan 2014	<b>Tuesday</b> 21 Jan 2014
			
Sunny <b>59°F</b> 43°F	Sunny <b>66°F</b> 49°F	Few Showers <b>70°F</b> 48°F	Partly Cloudy <b>57°F</b> 33°F

**Detailed Forecast**

**Today:**  
Partly cloudy. High 59F. Winds NW at 10 to 20 mph.  
**Tonight:**  
Clear skies. Low 32F. Winds NNW at 5 to 10 mph.  
**Tomorrow:**  
Abundant sunshine. Highs in the upper 50s and lows in the low 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)	Code 1 requirements plus: <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.	Code 1 requirements plus: <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)	Code 1 requirements plus: <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.	Code 1 and 2 requirements plus: <ul style="list-style-type: none"> <li>Work is allowed on a case by case basis as determined by TBC Operations:</li> </ul>

1. All site work must be approved by TBC Response Operations.
2. 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.
3. 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:

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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:

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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:

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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:

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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.