November 14, 2012

Mr. Gary Snellgrove
Louisiana Department of Natural Resources
617 North Third Street
Baton Rouge, LA 70802-5431

Dear Mr. Snellgrove:

RE: Work Plan in Response to Directive Item #2 in Third Amendment to Declaration of Emergency and Directive, Dated October 11, 2012, Assumption Parish Sinkhole, Texas Brine Company, L.L.C. (Revision 2)

RESPEC has been engaged by Texas Brine Company, L.L.C. (TBC) to provide a Work Plan in response to Directive Item #2 in the Third Amendment to Declaration of Emergency and Directive issued to TBC by the Louisiana Department of Natural Resources (LDNR) Office of Conservation on October 11, 2012.

Directive #2 states:

> *Install and monitor additional direct push wells, such as Geoprobe wells, to monitor water quality and pressures in the Bayou Corne community. Install and monitor permanent elevation benchmarks at each direct-push well location by a professional licensed surveyor. On or before Tuesday, October 16, 2012, provide Conservation with a plan for direct-push well installation, ongoing monitoring/maintenance, evaluation, reporting and closure/plugging and abandonment.*

BACKGROUND

Directive #2 is an expansion of penetrative investigations in the Bayou Corne community completed by Shaw Environmental & Infrastructure, Inc. (Shaw) at the direction of LDNR. The previous investigation involved drilling of 18 Geoprobe® monitoring wells that were advanced to the shallowest, water-bearing sand and three observation /relief wells into the top of the Mississippi River Alluvial Aquifer (MRAA). These previously drilled well locations are shown in Figure 1.

This plan discusses the Scope of Work required to address Directive #2 and includes specific sections regarding the methods and schedule for installing Geoprobe® monitoring wells and pressure monitoring wells, survey benchmark installations, well monitoring and maintenance, and well closure/plugging and abandonment. The details of this plan are consistent with descriptions of currently employed approaches to well construction and monitoring provided by LDNR via emails sent October 19–22, 2012. These email exchanges maximized the potential for future data, collected from the investigation area, to be as consistent in nature and quality as previously collected data.

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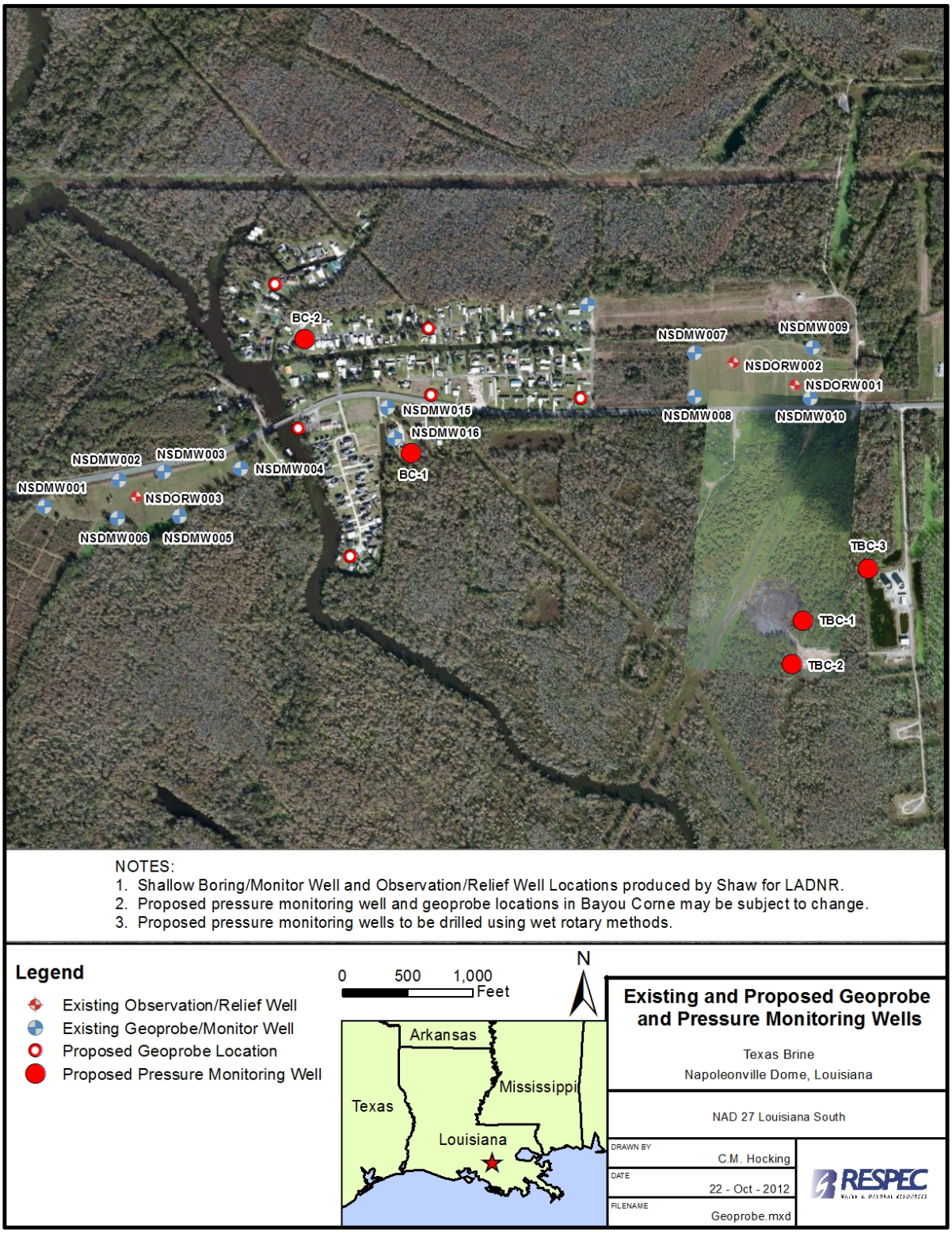

Figure 1. Existing and Proposed Geoprobe® Monitoring Well and Mississippi River Alluvial Aquifer Pressure Monitoring Well Locations.

SCOPE OF WORK FOR GEOPROBE® MONITORING WELLS

TBC proposes the drilling of six Geoprobe® monitoring wells in the Bayou Corne community. The Geoprobe® monitoring wells are intended to permit water-quality monitoring and gas pressure monitoring in the aquitard overlying the MRAA. These wells will be installed, using Geoprobe® direct-push technology, to the depth of the shallowest water-bearing sand. Drilling and well installation methods will be in accordance with the schematic well completion diagram generated by Shaw and provided in Figure 2. Survey benchmarks will be installed at each of the six Geoprobe® monitoring wells for future subsidence surveys.

Drilling and Well Construction

The Geoprobe® soil borings will be drilled to a maximum depth of 50 feet below ground surface (ft-bgs) consistent with previous monitoring well installation and completion activities in the community. The borings will be advanced to total depth using a hydraulic profiling tool (HPT). As described on the Geoprobe® web page (*http://geoprobe.com/hpt-hydraulic-profiling-tool*), the HPT is a direct-push logging tool used to measure the pressure required to inject the flow of water into soil as the Geoprobe® boring is advanced downward. This injection pressure is a proxy measurement for permeability and, therefore, can be used to interpret the depths of sand and clay units in the upper confining layer above the MRAA. The HTP is also equipped with an electrical conductivity probe and can be used for detecting saline water in the upper confining layer.

The tool collects data and transmits to a recorder at the surface that displays the data in the form of a well log. The logs can be interpreted to determine the lithology and hydrostratigraphy of the subsurface at the boring location. This data will be used to determine a suitable water-bearing zone for completing a well that will provide representative groundwater samples for laboratory analysis.

When interpreting the HPT log and determining the targeted, saturated zone, a monitoring well assembly (10 feet of 1-inch inside diameter polyvinyl chloride [PVC] screen with a prepacked sand filter and PVC casing) will be inserted into the borehole to the preferred depth (see Figure 2). An expendable tip will be used at the end of the drill string for inserting the well assembly.

The monitoring well will be completed at the surface with a flush-mount protective casing system that consists of a 2-foot by 2-foot cement pad with a bolt-down well cover (see Figure 2). The wellhead will include a valve and quick-connect fitting to allow for pressure measurements before opening the well for sampling. A construction detail for the wellhead fittings that follow the Shaw design is provided in Figure 3. Pressure gauging will be conducted using two pressure gauge/air sampling assemblies in sequence. The first gauge will have a range of 0 to 30 psi. If no pressure is indicated or the pressure is below 5 psi, then a second gauge with a range of 0 to 5 psi will be used. The well head will include a valve for gas venting, if it becomes necessary.

Benchmark Construction and Surveying

The wellhead reference points for future water level measurements will be surveyed by a licensed surveyor after they are completed. The licensed surveyor will also oversee the

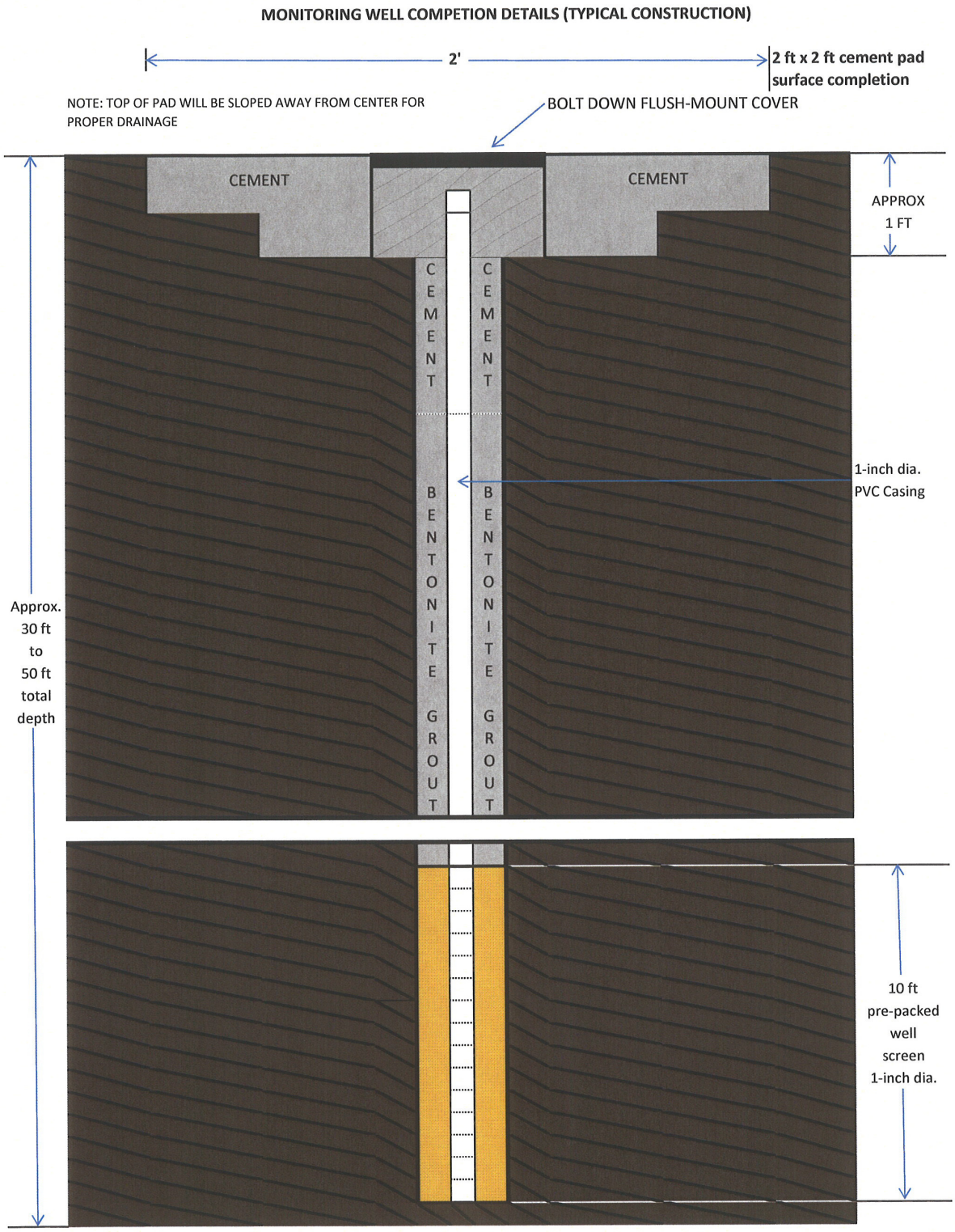

Figure 2. Shallow Geoprobe® Monitoring Well Construction Details According to Shaw Environmental & Infrastructure, Inc. Design.

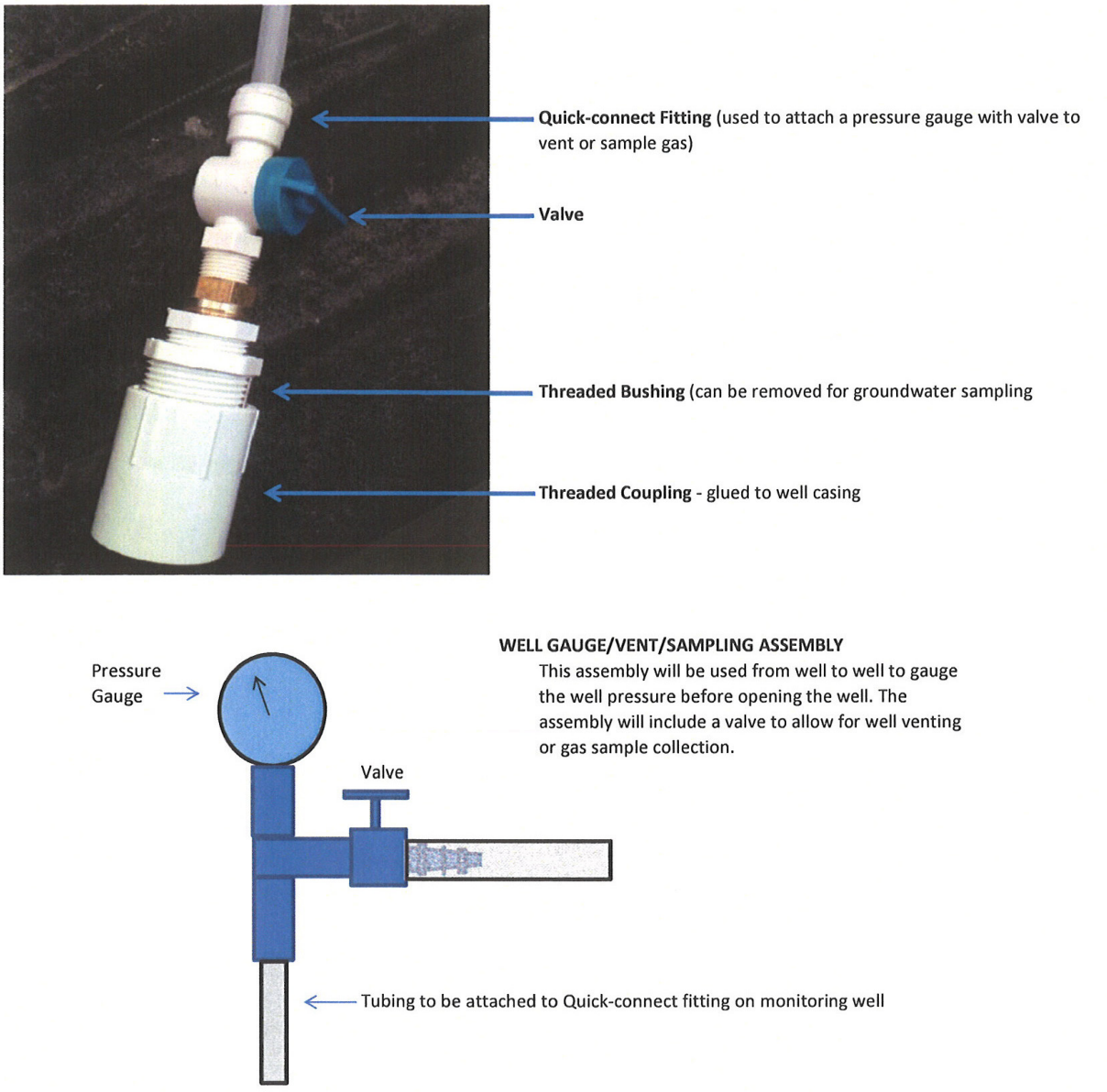

Figure 3. Shallow Geoprobe® Monitoring Well Wellhead Fittings Detail According to Shaw Environmental & Infrastructure, Inc. Design.

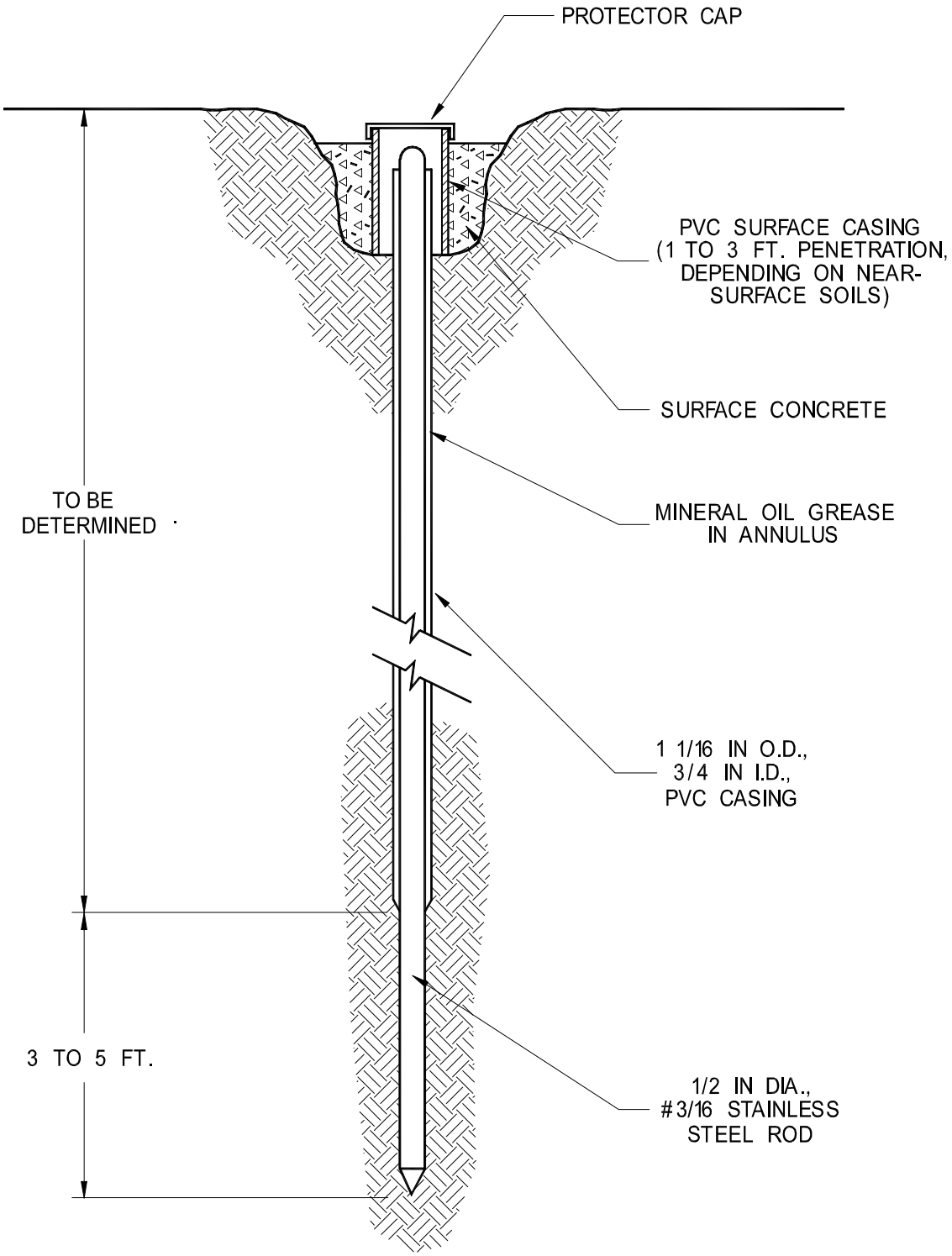

Figure 4. Geoprobe® Monitoring Well Surface Elevation Benchmark.

installation and conduct periodic monitoring of permanent elevation benchmarks at each Geoprobe® monitoring well location. The proposed benchmark design is illustrated in Figure 4.

The benchmark will consist of a 35-foot-long stainless steel rod installed through a 30-foot-long PVC casing. The stainless steel rod will be lubricated with mineral oil and detached from the PVC casing and protective cap that will minimize the potential movement of the rod as a result of heave or changes in soil moisture content.

To install each benchmark, a 3-inch-diameter hole will be dug, using an engine-powered auger or Geoprobe® tool, down to 3 feet bgs. Then, a two-inch hole will be drilled down to 30 feet using Geoprobe® tools, and the PVC casing will be grouted in. The lubricated steel rod will then be driven to 35 feet, thereby advancing 5 feet below the bottom of the PVC casing. The annular space between the PVC casing and the steel rod will be filled with mineral oil. The shallow 3-foot deep, 3-inch-diameter auger hole will be filled with bag concrete to the surface. The top of the PVC casing will be fitted with a protective cap with survey location markings.

A professional survey will be conducted following benchmark installation. The professional surveyor will conducted monthly surveying to monitor ground surface elevations.

Gas Monitoring and Groundwater Sampling

When installing each monitoring well, air measurements will be obtained from the well using a flame ionization detector (FID), an explosimeter that measures lower explosive limit (LEL), and an oxygen meter to determine the presence of methane gas, carbon dioxide, and oxygen levels. If methane is detected, a pressure reading will be collected at the wellhead, and a sample will be collected for compositional gas analysis.

A groundwater sample will be obtained from each monitoring well. Samples will be obtained by using a peristaltic pump with clean disposable tubing and/or tubing with a Waterra foot valve. Each well will be developed by purging three or more well volumes or until groundwater is relatively clear of particulate matter before sample collection.

Field parameter measurements will also be collected during well purging/sampling using a multiparameter meter (Insitu 9500 Troll or equivalent) with a flow-through cell and will include pH, temperature, conductivity, oxygen reduction potential (ORP), and dissolved oxygen (DO).

At least one groundwater sample from each well will be analyzed for Compound Stable Isotope Analysis. Groundwater samples from each well will also be collected and analyzed for Total Petroleum Hydrocarbons–Gasoline Range Organics (TPH-GRO), TPH-Diesel Range Organics (TPH-DRO), and TPH-Oil Range Organics (TPH-ORO) fractions by using the TX 1006/LA 1006 method and the U.S. Environmental Protection Agency (EPA) Method 8015. Samples will also be analyzed for chlorides by U.S. EPA Method 4500. Groundwater sampling for laboratory analyses will be performed one time at each well unless laboratory analyses indicate the presence of these analytes at concentrations above background levels.

SCOPE OF WORK FOR PRESSURE MONITORING WELLS

TBC proposes the drilling of two pressure monitoring wells into the MRAA in the Bayou Corne community (see Figure 1). The ultimate design of these pressure monitoring wells will

depend upon localized findings relative to presence of gas under pressure. For proposed locations that do not prove to have gas under pressure in the top of the MRAA, the pressure monitoring wells will be installed using Geoprobe tools. If gas is encountered under pressure, a 2-inch well will be installed using wet rotary methods.

To confirm local gas conditions in the MRAA, a hydraulic, direct push Geoprobe drilling rig equipped with steel, dual tube sampling equipment will first be utilized to define the depth and pressure of any gas zones in the upper confining clay and the MRAA at the pressure monitoring well locations. A specially fabricated, steel gas venting/pressure cap has been built which will enable the driller to screw the cap onto the outer Geoprobe steel casing and shut off gas flow from the borehole. The cap will also allow the borehole to be pressure grouted without removing the cap.

If no gas zones are encountered during the completion of the Geoprobe borehole into the top of the MRAA then the Geoprobe may be utilized to install a ¾" or 1" diameter stainless steel well casing equipped with a 5-or 10-foot long well screens in the top portion of the MRAA.

If gas is encountered at pressures that preclude safe use of Geoprobe tools to install the well, a mud rotary rig and fresh water based drilling mud will be utilized to install a 2-inch monitoring well according to the design provided by LDNR and illustrated in Figure 5. First, a four-inch diameter steel surface casing will be driven to the depth of the gas zone as determined by the Geoprobe borehole. A steel pressure cap (rated at 1,500 psi) will be installed on the steel surface casing prior to drilling through the casing to the target depths of the monitoring well (10 feet into the MRAA).

Well caps will be j-plug type to permit establishment of a gas-tight seal. The well caps will be equipped with nonsparking valves and quick-connect fittings to permit connection of a digital gauge for pressure measurements.

In addition to the two pressure monitor wells in the Bayou Corne community, TBC proposes to complete three previously planned geotechnical borings at the TBC facility with pressure monitor wells, which brings the total number of these wells to five (see Figure 1). The three borings on the TBC facility are intended to collect pocket penetrometer data from the upper 100 feet of the subsurface to supplement geotechnical testing of soil samples from the recently completed Overburden Characterization Hole (OCH) located on the western edge of the Cavern #2 well pad. Given LDNR's focus on observation and venting of any gas in the MRAA, TBC will undertake the additional effort to advance the geotechnical borings to a depth approximately 10 feet into the top of the MRAA and equip the holes with pressure monitor wells using the same approach described above for the two wells in Bayou Corne. The positions of the three pressure monitor wells at the TBC facility may be shifted slightly to accommodate a truck-mounted drilling rig and to preclude drilling in swamp.

After the wellheads are complete, wellhead reference points will be established for the five pressure monitoring wells for future water-level measurements, and they will be surveyed by a licensed surveyor. The reference points on newly installed wellheads will be monitored as part of the biweekly subsidence surveys currently performed by TBC.

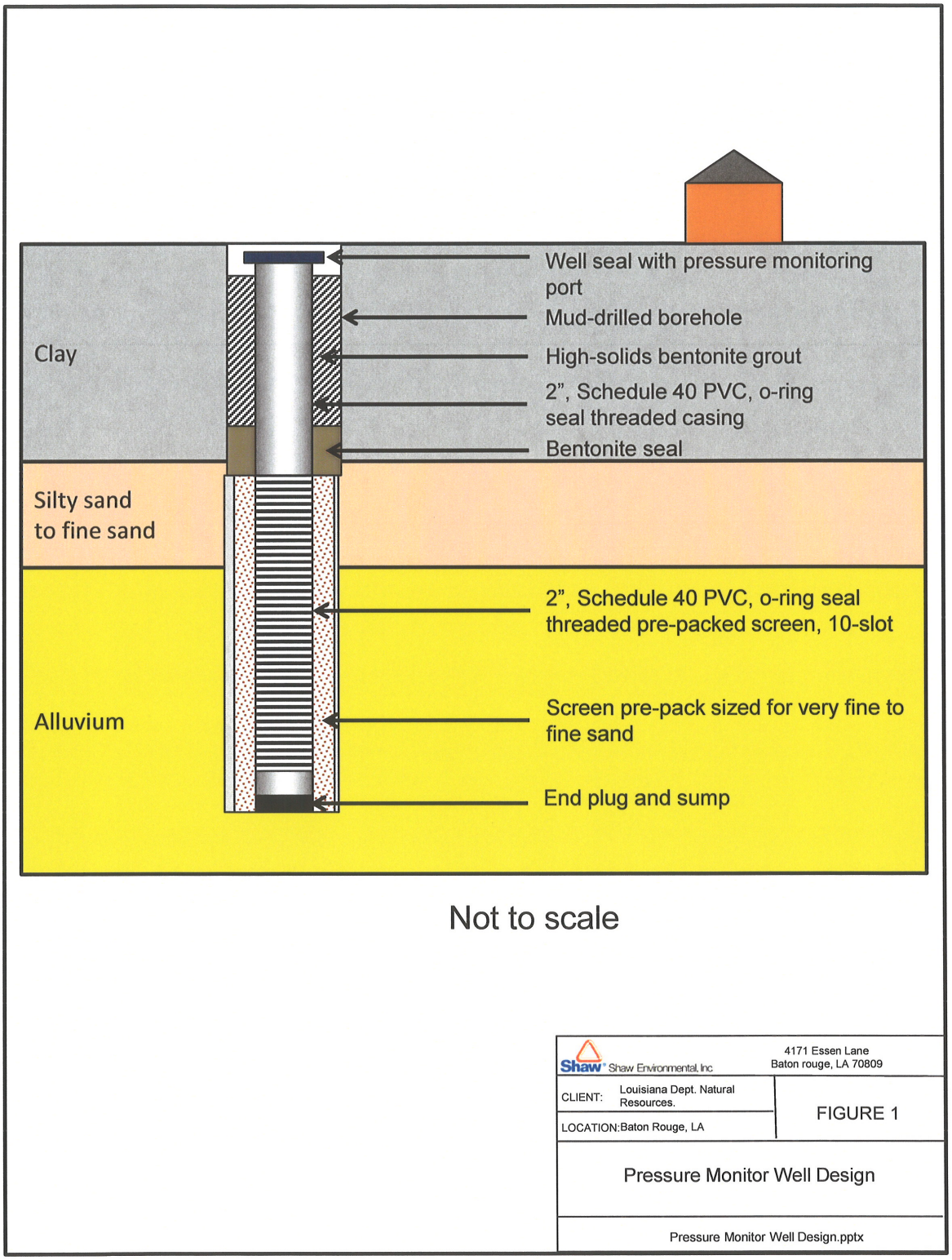

Figure 5. Mississippi River Alluvial Aquifer Pressure Monitor Well Construction Details as Per Shaw Environmental & Infrastructure, Inc. Design.

Upon installation of each pressure monitoring well, air measurements will be obtained using a FID, an explosimeter measuring LEL, and an oxygen meter from the well to determine if methane gas, carbon dioxide, and oxygen levels are present. If methane is detected, a pressure reading will be collected at the wellhead, and a sample will be collected for compositional gas analysis.

SCOPE OF WORK FOR ONGOING MONITORING/MAINTENANCE

TBC intends to complete initial monitoring and sampling of the newly completed Geoprobe® monitoring wells and MRAA pressure monitoring wells. TBC proposes ongoing monitoring and maintenance of the expanded network of Geoprobe® monitoring wells and observation/relief wells on a data-supported basis. Other parameters may be included for analysis based on results from initial and ongoing monitoring efforts. Specifically, TBC recommends that field data be collected from both the expanded network of Geoprobe® monitoring wells and the pressure monitoring wells weekly for the first month following the initial monitoring event. Field data collected from Geoprobe® monitoring wells will include gas measurements using a FID, an explosimeter that measures LEL, and an oxygen meter to determine the presence of methane gas, carbon dioxide, and oxygen levels. If methane is detected, a pressure reading will be collected at the wellhead using the two pressure gauge/air sampling assemblies, as appropriate. The percent methane will be measured using the pressure gauging/air sampling assembly and a LANDTEC GEM™2000 Gas Analyzer & Extraction Monitor (Gem2K) or equivalent. The depth to groundwater shall be measured from the top of casing using an electronic water level indicator. Depths will be recorded to the nearest hundredth of a foot (0.01). Note that the FID, explosimeter, and oxygen meter will be employed as required for ambient air monitoring and for screening the inside of the well curb box to ensure that conditions remain acceptable for personnel. This will be followed by the pressure gauging, percent methane readings, and finally the water level measurements.

In addition, a groundwater sample will be obtained from each monitoring well. Samples will be obtained using a peristaltic pump with clean disposable tubing and/or tubing with a Waterra foot valve. Field parameter measurements will be collected as a minimum of three well volumes are purged from each well. Field parameters including pH, temperature, conductivity, ORP, and DO will be collected using a multiparameter meter (Insitu 9500 Troll or equivalent) with a flow-through cell.

For each pressure monitor well, air measurements will be obtained from the well using a FID, an explosimeter measuring LEL, and an oxygen meter to determine the presence of methane gas, carbon dioxide, and oxygen levels. If methane is detected, a pressure reading will be collected at the wellhead using the two pressure gauge/air sampling assemblies, as appropriate. The percent methane will be measured using the pressure gauging/air sampling assembly and a LANDTEC GEM™2000 Gas Analyzer & Extraction Monitor (Gem2K) or equivalent. The depth to groundwater shall be measured from the top of casing using an electronic water level indicator. Depths will be recorded to the nearest hundredth of a foot (0.01). Note that the FID, explosimeter, and oxygen meter will be employed as required for ambient air monitoring and for screening the inside of the well curb box to ensure that

conditions remain acceptable for personnel. This will be followed by the pressure gauging, precent methane readings, and finally the water level measurements.

Following 4 weeks of field data collection, TBC will present an evaluation of the compiled data to LDNR and offer recommendations on modifying the monitoring plan based on that data evaluation. After LDNR has the opportunity to review the data from the first 4 weeks of monitoring and to assess TBC's recommendation on the scope and schedule of further monitoring, TBC and LDNR can finalize a plan for continued monitoring, if it is necessary.

DATA EVALUATION AND REPORTING

Summaries of field activities and collected field data will be compiled and reported according to the ongoing daily and weekly reporting schedules negotiated between LDNR and TBC. Field data measurements will be reported weekly to LDNR in Excel format. A report documenting the results of analytical data gathered from the initial round of sampling of the Geoprobe® monitoring wells and the MRAA pressure monitoring wells will be submitted within 2 weeks after receiving the final laboratory reports for analyzed groundwater and gas samples.

SCOPE OF WORK FOR CLOSURE/PLUGGING AND ABANDONMENT

Geoprobe® Monitoring Wells

When the investigation and active monitoring period is completed, the Geoprobe® monitoring wells will be abandoned in accordance with applicable state regulations. Pending approval by LDNR, TBC proposes that the Geoprobe® monitoring wells be abandoned by demolition of the concrete well pad, followed by overdrilling and removing of PVC well materials, and then grouting the borehole to surface using the Tremie method.

Mississippi River Alluvial Aquifer Pressure Monitor Wells

When the investigation and active monitoring period is completed, the MRAA pressure monitoring wells will be abandoned according to the applicable state regulations. Pending approval by LDNR, TBC proposes that the MRAA pressure monitor wells be abandoned by demolishing the concrete well pad, overdrilling and removing the PVC well materials, and then grouting the borehole through drill rods from the bottom of the hole up to the surface.

SCHEDULE

TBC is prepared to initiate the field program outlined herein within 1 week of LDNR's approval of this Work Plan. The initial phase of the program will involve finalizing the locations for the Geoprobe® monitoring well locations in Bayou Corne (pending the successful negotiation of property access agreements). When the property access agreements are in place, proposed drilling locations will be staked out, utility clearances will be called in, and drilling locations will be finalized.

Drilling will start immediately following the finalization of locations and will be contingent upon contractor and HPT tool availability. Drilling is estimated to require approximately 3 weeks to complete.

Geoprobe® monitoring well benchmarks will be constructed concurrently with drilling and will be surveyed along with well locations upon their completion. Both Geoprobe® monitoring wells and MRAA pressure monitoring wells will be developed no sooner than 48 hours after their completion to allow full hydration of the bentonite seals. Purging and sampling of the Geoprobe® monitoring wells will take place no sooner than 1 day after successful well development to allow the well to recover.

Thank you for the ongoing communication that completed this Work Plan. If you have any questions or need further information, please contact me by telephone (315.573.6366) or email (*William.Goodman@respec.com).*

Sincerely,

William M. Goodman

William M. Goodman, Ph.D.
Manager, Mine & Geological Services

WMG:llf

cc: Project Central File 2153 — Category A