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**LOAD ASSURANCE****Permian Basin Materials, LLC**

Permian Basin Materials, LLC is located in Odessa, TX, managing 15 ready mix operations and over 20 aggregate locations.

**The Challenge**

Working in the southern region in the ready mix business, Permian Basin Materials, LLC (PB Materials) found that a big problem was the abuse of water addition – which often resulted in wasted time and sometimes wasted materials.

**The Solution**

The visibility that Load Assurance provides was the answer to manage and document water addition to their mix designs. The system captures real-time and historical data on the properties of concrete from the time of loading through placement. Slump, temperature, volume, drum rotation, homogeneity, water additions, and other data that summarizes the overall workability of the concrete in the drum is available in real time to all stake holders in a ready mix operation.

Sensor data provides visibility that ensures that job specifications are met while removing materials waste and saving time that would be wasted adjusting slump. This visibility also allows for continuous

improvement where the collected data brings meaningful information to the entire enterprise. The data collected from the probe is fed back into other Command Alkon systems for production, dispatch, quality control, and fleet management.

**The Result**

According to Brad Burke, Technical Services &

**LOCATION**  
**Texas****PROJECT TYPE**  
**Multiple****RESULTS**  
**Less Wasted Material**

Marketing Manager at PB Materials, the system truly supports the company's QC efforts to deliver and monitor quality concrete. The information that the system provides holds everyone that has a hand in the concrete accountable – from the batchman, to the drivers, as well as contractors. Brad cited a few examples where he realized firsthand the impact that Load Assurance makes on their operations.

### **Midland Holiday Inn**

The first was at a job for Midland Holiday Inn. There was an elevated deck that needed to achieve 6000 PSI in 28 days. This project was unique in that construction on the hotel began five years before being put on hold, and then the building codes changed. The construction company was either going to have to make the entire outside of the building 30 inches taller at a tremendous expense to accommodate the deeper beams for the HVAC system. Or, they could use a 12-inch, 6000 PSI monolithic deck, keep the same HVAC design, and the same building height.

To ensure their materials would hit the 6000 PSI mark, the addition of water and temperature needed monitoring. It was also winter time, which can cause issues in itself. The production plant where the concrete was being batched didn't have hot water, further adding to the challenges. Despite Brad's warnings that the materials would be at risk of meeting the minimum concrete temperature spec, the customer insisted that the materials be delivered to stay on schedule.

The night of the pour, Brad was able to monitor the jobsite remotely from 120 miles away. He saw that the temperature of the first load at the plant was 48 degrees, but eventually reached 51 degrees at the jobsite. The minimum spec is 50 degrees, and had Brad had many readings below that, he knew he would have been covered by the historical data that Load Assurance delivers. If something had gone wrong, he could access that information instantly and would be ready to defend the company's position and warnings.

### **Commercial Interior Floor**

PB Materials had a job doing a commercial interior floor. The contractor had an issue with cracks in the materials. The subcontractor on the job called PBM to ask about the data that Load Assurance pulled on the water addition of the pour by the subcontractor. When Brad pulled up the report from the pour, they discovered that the water addition by the subcontractor's crew on site was 40-60 gallons per load. Without the data from Load Assurance, this situation usually turns out much different. There is often a debate over the amount of water addition hand written on each delivery ticket and each driver's estimate can be different. Load Assurance eliminates the guesswork and shows the water added. Because PB Materials could prove that it was not their fault, they did not have to fork over money for something that they did not do, and the subcontractor could reeducate his staff and get them to do things the right way.

### **60 Cubic Yard Foundation Form Failure**

PB Materials had a 60 cubic yard foundation placement where the last truck was on site and started to pour. The crew stopped the pour before the truck completed unloading and sat on site for over an hour to fix a problem with the forms. Once they began pouring the last load, the load had timed out and the mix had lost too much slump. Ultimately, this foundation needed replacement and the contractor tried to blame the problem on PB Materials. Due to having the time stamps on all statuses of this load and having the documented delays in the placement, PB Materials was able to prove they were not the cause of the issue.



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