

## LAFARGE FREDERICK

FREDERICK - USA

### Structural monitoring of an Asphalt plant located within a quarry using real time acquisition and alarms.

The Kline Asphalt Plant is located on Karstic limestone and had seen significant sinkhole activity.

A program of drilling and void filling using low flow grouting techniques was initiated.

In addition to a carefully engineered construction process, standard surveying and laser levels were being considered for detection of any ground and/or building movements. For the monitoring process to be most effective it was necessary to be able to detect small movements rapidly enough to allow modification of the construction process before any actual damage to plant and machinery was caused.

SolData performed the real-time monitoring to all of the structures and Asphalt Plant during the drilling and Grouting works.

The Kline Plant had several structures that were deemed to be sensitive to potential movements during these works and the SolData system allowed them to be monitored in real time with automated alarms systems in place

A single Cyclops unit was installed on the roof of the control building which monitored the silo area, the bag house area, the drum mixer area and the shaker areas.

The system sounded an alarm when movements exceed set trigger values. This was set up as one of the three control criteria for the project (pressure, volume, and movement).



Monitoring of sensitive structures during grouting works



OWNER :	LAFARGE
CLIENT :	STRUCTURAL PRESERVATIONS SYSTEMS INC.
PROJECT DURATION:	3 MONTHS
<b>SCOPE OF WORKS:</b>	
<ul style="list-style-type: none"><li>• Installation of one CYCLOPS</li><li>• Real time monitoring of 50 prism targets</li><li>• Real time visualization of structural deformations</li><li>• Real time Alarms</li><li>• Remote real time visualization of deformations through the Internet</li></ul>	