

## Troxler Moisture Management System



Hard to manage stockpiles depending on weather, available stock area or availably of product.

Moisture in this stockpile varied from 1.2% to 4.9%

Moisture variation is like a Ghost no one notices. It sneaks in and when you're not looking ... A bucket of slop or bone dry stock!!!! It shows up as an asphalt content that in itself is not so alarming.





But you will feel it Like a chill When you evaluate PWT





MMS can help

### Test series intentional variation moisture of feed stock

TPH	9.5mm	Composote	MMS	Calculated	MMS vs Sample	calc vs Sample
250	WET	3.7	3.3	3.7	-0.4	0
250	DAMP	2.5	2.3	2.6	-0.2	-0.1
250	DRY	1.6	1.7	1.7	0.1	-0.1
315	WET	3	2.9	3.34	-0.1	-0.34
315	DAMP	2.8	2.6	2.56	-0.2	0.24
315	DRY	2.2	2	1.78	-0.2	0.42

# This Chart depicts differences in Lab tests compared to the MMS



### Automation/Monitor Controls

- The MMS can be utilized strictly as a moisture monitor or linked to the Automation
- The automation component is pretty straight forward with addition of failsafe tolerances.
- The device is linked to the automation with tolerance limits to assure that any unforeseen malfunction cannot affect mix quality.

#### Automation

- The system will track moistures and use the real time value unless it exceeds the user-set limits from calculated moisture based on stockpile testing.
- If the limits are exceeded the system reverts back to the original Moisture based on the lab testing.
- If a change is apparent the operator will contact the technician for direction. i.e. maintain calculated content until additional stockpile samples are tested.

#### In the Real world

- The composite moisture from stockpile tests is calculated to be 3%.
- But as the fresh stock is depleted the loader moves into old wet stock!
- Rain from the weekend left the coarse aggregates damp but with poor drainage the loader occasionally hits the bottom and takes a scoop of soup....

• The composite moisture is **NOW at 6%** Seems extreme but is not uncommon

This could easily lead to variations of up to 0.2% Asphalt content in the finished mix. !!!!