PLANT LEVEL MOISTURE CONTENT (D109)

Specification for the introduction of Moisture Content on a per plant basis (D109)

Project:	42003
System:	QESTMix
Author:	Lief Martin
Date Created:	17 January 2006
Date Last Modified:	18 January 2006
Revision:	1.0
Filename:	42003-2064 plant level moisture content (d109).mht

DOCUMENT CONTROL

Date	Author	Revision	Change Reference
17 Jan 06	Lief Martin	1.0	Original Document

RELATED DOCUMENTATION

Name	Location	Details
D109 Plant Level Moisture Content.doc	\\adls0003\Documents\Customer\Active\AURMX - Readymix Holdings\42003 National System\Specifications\D109 Plant Level Moisture Content.doc	Original Specification

TABLE OF CONTENTS

1. Business Requirements

1.1 Overview

Currently the moisture content of any constituent can only be set at the "*Material*" level. When using same materials at different plants, it has been proven that there can be a wide variation in moisture content based on which plant is using a particular material.

When printing Batch Cards, or exporting BOMs to manual concrete plants, there is a need to better reflect the more accurate moisture content to assist with batching accuracy.

2. Functional Requirements

2.1 Overview

This specification covers the changes required to implement moisture content on a per plant basis. There are some core changes to the QESTMix components that will be required, and also some changes to the user interface.

2.2 Core changes

The Core QESTMix objects need to be updated to support the use of plant-level moisture contents. The key components that will need to be updated are:

- Materials – Need to support the additional field in the plant/material relations table.

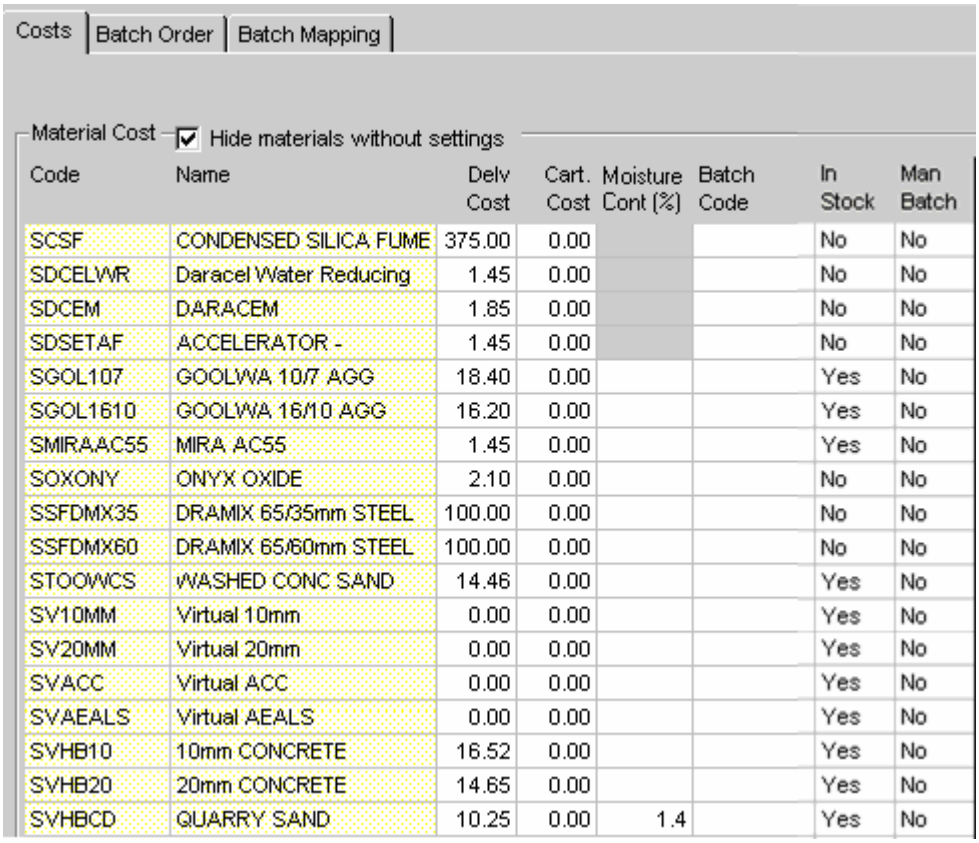
- Plants – Need to support the additional field in the plant/material relations table.

- Mixes – these need to be marked as changed (at the appropriate plant) when the plant level moisture content is changed. There are also some calculated fields that make use of the moisture content of the materials.

2.3 Plant Screen

The current materials grid needs to be expanded with an extra column for material moisture contents. This will be a numeric field with 1 decimal place. These will be stored in the QESTMix database in the same table as the material costs (per plant).

Moisture content will only be able to be stored for materials that are aggregates, sands, or additives. These are currently the materials that are able to have an associated moisture content (if this changes, then these cells would be enabled in the grid also).


Costs | Batch Order | Batch Mapping

Material Cost — ☑ Hide materials without settings

Code	Name	Delv Cost	Cart. Cost	Moisture Cont (%)	Batch Code	In Stock	Man Batch
SCSF	CONDENSED SILICA FUME	375.00	0.00			No	No
SDCELWR	Daracel Water Reducing	1.45	0.00			No	No
SDCEM	DARACEM	1.85	0.00			No	No
SDSETAF	ACCELERATOR -	1.45	0.00			No	No
SGOL107	GOOLWA 10/7 AGG	18.40	0.00			Yes	No
SGOL1610	GOOLWA 16/10 AGG	16.20	0.00			Yes	No
SMIRAAC55	MIRA AC55	1.45	0.00			Yes	No
SOXONY	ONYX OXIDE	2.10	0.00			No	No
SSFDMX35	DRAMIX 65/35mm STEEL	100.00	0.00			No	No
SSFDMX60	DRAMIX 65/60mm STEEL	100.00	0.00			No	No
STOOWCS	WASHED CONC SAND	14.46	0.00			Yes	No
SV10MM	Virtual 10mm	0.00	0.00			Yes	No
SV20MM	Virtual 20mm	0.00	0.00			Yes	No
SVACC	Virtual ACC	0.00	0.00			Yes	No
SVAEALS	Virtual AEALS	0.00	0.00			Yes	No
SVHB10	10mm CONCRETE	16.52	0.00			Yes	No
SVHB20	20mm CONCRETE	14.65	0.00			Yes	No
SVHBCD	QUARRY SAND	10.25	0.00	1.4		Yes	No

2.4 Material Screen

The current plant/material relations grid needs to be expanded with an extra column for material moisture contents. These will be stored in the QESTMix database in the same table

as the material costs (per plant). The column will be locked out for material types that cannot have a moisture content associated with them (cements / admixtures).

The change in the material screen will be very similar to that in the plant screen, and will display exactly the same information. Note that the default moisture content will also be set on the material screen, through the "Properties" tab.

2.5 Mix Design Screen

The mix design screen needs to be changed to support the changes to the moisture content field. The new moisture content field is plant based, hence, the existing functionality of displaying the default moisture content needs to be used when no plant has been selected.

When a plant is selected, there are several things that need to be re-calculated.

1. The new moisture content needs to be displayed

2. The batch weights need to be re-calculated, based on the SSD weights, and the new moisture content.

3. All calculated fields that are affected by the moisture content need to be updated. Most importantly, "added water" needs to be recalculated to keep the same value for "total water".

Note: When there has been no plant level moisture set for a material, the default value will continue to be used.

2.6 Batch Cards

When the 'show moisture' option is selected, the moisture is displayed on the batch cards.

Where a plant level moisture content has been set, this value will be used. Where it has not been set, the default moisture content will be used. This also affects the batch weights and added water shown on the batch card.

2.7 Mix Group Mixes

This is the mixes grid, available through the "Mixes" node underneath the Mix Group node.

This section will not be changed. The only available moisture content will be the default moisture content for the material, and the batch weights will be based on this.

Currently, the only plant-specific information shown on this screen is the cost information. This will continue to be the case.

2.8 Materials Report

The materials report will not be changed. The only available moisture content will be the default moisture content for the material.

Currently the only plant-specific information shown on this report is the cost information. This will continue to be the case.

3. Assumptions and Additional Constraints

n/a