

8-5

# Field Inspection Reports:

## Review Precast Concrete

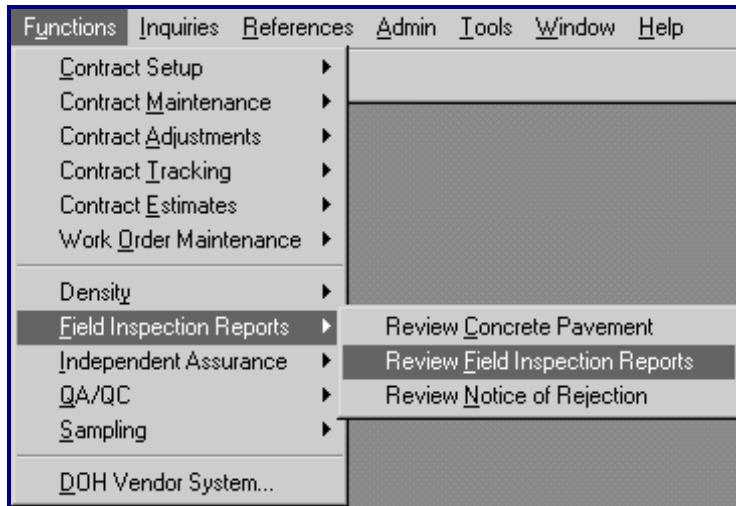
### **Objective**

Access to Precast Concrete

Using the windows in the Precast Concrete sub-module

# Review Precast Concrete

**Step 1:** Choose **Field Inspection Reports** from the **Functions** menu.

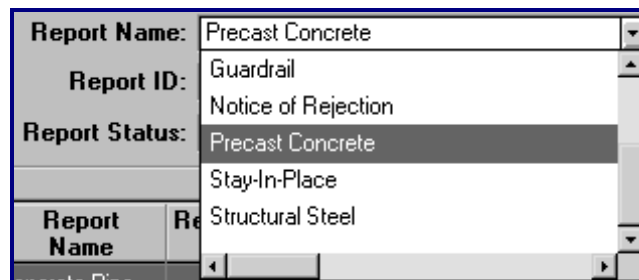


**Figure 1 - Access to Review Field Inspection Reports**

**Step 2:** To access a NEW Precast Concrete Report, click the *Report Name* field and select *Precast Concrete*.

The screenshot shows the 'Review Field Inspection Reports' window. It has a 'Filter' section with fields for Contract, Report Name, Report ID, Report Status, Material Type, Inspected By, Inspection Date, and Inspection Result. Below the filter is a table with the following data:

Report Name	Report ID	Contract	Material Type	Inspector	Inspection Date	Section	Inspection Result	Report Status
Concrete Pipe	2		Pipe Culvert, Concrete	Dean, Leigh Ann	04/02/2001	2&3	Meets Specs	In Process
Corrugated Metal	1	C104906	Pipe Culvert, Metal	Frederick, Samuel	04/09/2001	7&9	Meets Specs	In Process
Guardrail	3	C105136		Home, Kenneth	04/02/2001	2&3	Meets Specs	In Process



**Figure 2 - Access to a NEW Precast Concrete Report**

**Step 3:** Click the **New** button and the General tab for Precast Concrete is displayed:

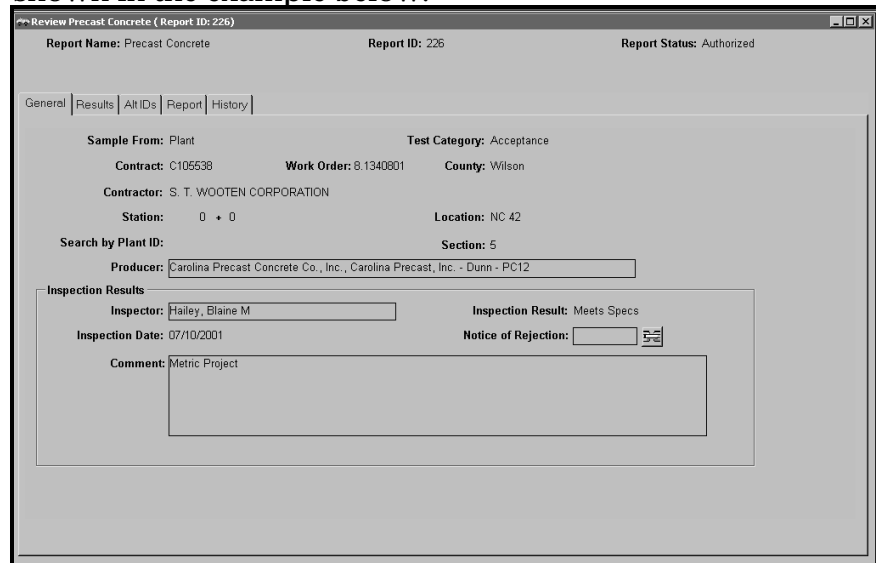
**Figure 3 - New Review Precast Concrete Window**

**Step 4:** To access an EXISTING Precast Concrete Report, follow Step 1 above and double-click the desired report from the list displayed or click the **Details** button, after selecting the desired report:

Report Name	Report ID	Contract	Material Type	Inspector	Inspection Date	Section	Inspection Result	Report Status
Precast Concrete	2	C105538		Hailey, Elaine M	06/08/2001	5	Meets Specs	Authorized
Precast Concrete	5	C105538		Hailey, Elaine M	06/08/2001	5	Meets Specs	Authorized
Precast Concrete	222	C105538		Hailey, Elaine M	06/28/2001	5	Meets Specs	Authorized
Precast Concrete	291	C105538		Hailey, Elaine M	07/10/2001	5	Meets Specs	Authorized
Precast Concrete	226	C105538		Hailey, Elaine M	07/10/2001	5	Meets Specs	Authorized
Precast Concrete	295	C105538		Hailey, Elaine M	07/19/2001	5	Meets Specs	Authorized

**Figure 4 - Access to an EXISTING Precast Concrete Report**

**Step 5:** The **Review Precast Concrete** report details are displayed as shown in the example below:



Review Precast Concrete ( Report ID: 226)

Report Name: Precast Concrete      Report ID: 226      Report Status: Authorized

General | Results | Alt IDs | Report | History

Sample From: Plant      Test Category: Acceptance

Contract: C105538      Work Order: 8.1340801      County: Wilson

Contractor: S. T. WOOTEN CORPORATION

Station: 0 + 0      Location: NC 42

Search by Plant ID:      Section: 5

Producer: Carolina Precast Concrete Co., Inc., Carolina Precast, Inc. - Dunn - PC12

Inspection Results

Inspector: Hailey, Blaine M      Inspection Result: Meets Specs

Inspection Date: 07/10/2001      Notice of Rejection:

Comment: Metric Project

**Figure 5 - Review Precast Concrete (General Tab Window)**

**Note:** To further aid in the retrieval of an EXISTING report, there are filtering functions available in HiCAMS. These filter functions are especially helpful when choosing from a very large listing of reports. See *Field Inspection Reports: Overview - Retrieval Tips* for all Field Inspection Reports for details using these functions.

## Overview - Review Precast Concrete

The acceptance of Precast Concrete units are based on the following:

- ◆ tests of materials
- ◆ compression tests on concrete cylinders
- ◆ inspection of the finished units

The inspector will have the authority to reject any or all units not manufactured in accordance with the above specifications. Any unit found to be defective in any manner may be rejected and replaced by an acceptable unit or repaired in a manner approved by the Engineer.

## General Tab - Review Precast Concrete

**Step 1:** The **General Tab** allows entry of the following information:

- ◆ *Sample is from* - The Sample From category for Precast Concrete reports is required and will default to “Plant” on the window. (Required field)
- ◆ *Test Category* - The Testing Category for all Precast Concrete reports is required and defaults to “Acceptance” on the window. (Required field)
- ◆ the *Contract* number

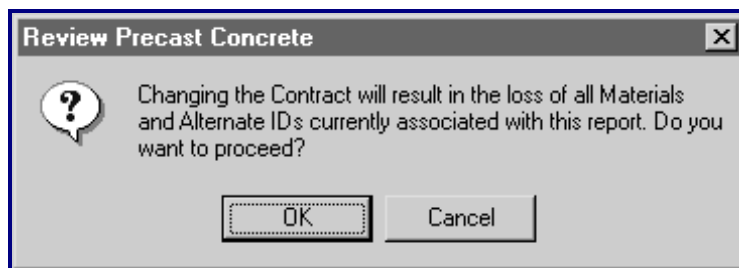
**Note:** *When the contract number is entered, the Station From and Location fields are required.*

The *minimum* requirements to save a *Precast Concrete* record are the following fields. (This message is displayed when attempting to save the record without entering these fields.)



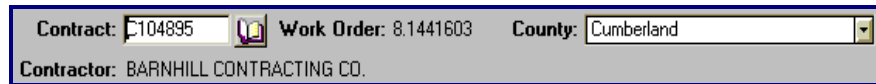
**Figure 6 - Advisory Message, Required Information**

**Tip:** *If the contract number is changed after the original report is saved, the following message will appear:*



**Figure 7 - Advisory Message**

Entry/selection of a Contract number automatically enters the Work Order, the County, and Contractor that is associated with the Contract number. See example below:

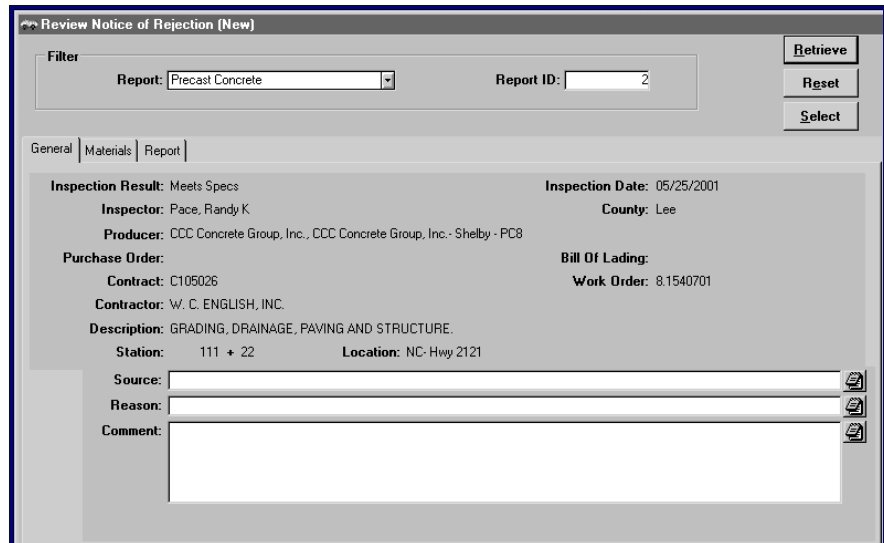


Contract: 104895 Work Order: 8.1441603 County: Cumberland  
Contractor: BARNHILL CONTRACTING CO.

**Figure 8 - Contract Number, Default Fields**

**Note:** *The Notice of Rejection field is activated when any rejected amounts are recorded on the Results Tab Window and the record is saved.*

When the **Notice of Rejection** button is clicked, the following window appears for the material:



Review Notice of Rejection (New)

Filter  
Report: Precast Concrete Report ID: 2

Retrieve  
Reset  
Select

General | Materials | Report

Inspection Result: Meets Specs Inspection Date: 05/25/2001  
Inspector: Pace, Randy K County: Lee  
Producer: CCC Concrete Group, Inc., CCC Concrete Group, Inc. - Shelby - PCB  
Purchase Order:  
Contract: C105026 Bill Of Lading:  
Contractor: W. C. ENGLISH, INC. Work Order: 8.1540701  
Description: GRADING, DRAINAGE, PAVING AND STRUCTURE.  
Station: 111 + 22 Location: NC Hwy 2121  
Source:  
Reason:  
Comment:

**Figure 9 - Notice of Rejection Window for Precast Concrete**

The following is an example of a report with the “General” information completed:

The screenshot shows the 'Review Precast Concrete (New)' window with the 'General' tab selected. The fields are as follows:

- Report Name: Precast Concrete
- Report ID: (empty)
- Report Status: In Process
- Sample From: Plant
- Test Category: Acceptance
- Contract: C105026
- Work Order: 8.1540701
- County: Lee
- Contractor: W. C. ENGLISH, INC.
- Station: 111 + 22
- Location: NC Hwy 2121
- Search by Plant ID: PC8
- Section: 6&8
- Producer: CCC Concrete Group, Inc., CCC Concrete Group, Inc. - Shelby - PC8
- Inspector: Face, Randy K
- Inspection Date: 05/25/2001
- Inspection Result: Meets Specs
- Notice of Rejection: (empty)
- Comment: TEST COMMENT

**Figure 10 - Precast Concrete General Tab Window**

## Results Tab - Review Precast Concrete

The **Results Tab** allows multiple Material Types per Report with one or more associated Materials per Material Type.

The materials listed in this window will default to the selected Material if only one material exists and the Contract Number has been entered. The Results tab contains all test results for the individual Materials.

- Step 1:** To insert test results into this **Results** tab window, click the **Insert** button and enter the result data.
- Step 2:** To delete a result row, select the appropriate row, and click the **Erase** button on the appropriate row to delete:

HiCAMS - [testconb]

File Edit Functions Inquiries References Admin Tools Window Help

Review Precast Concrete (New)

Report Name: Precast Concrete Report ID: Report Status: In Process

General Results Alt IDs Report History

Material Type	Material	Date Made	Date Tested	Age At Test	Accepted	Rejected	Inspection Result
		00/00/0000	00/00/0000		.000	.000	
		00/00/0000	00/00/0000		.000	.000	

Concrete Mix:

Air Content %:

Slump:

Compressive Strength

Cylinder 1:

Cylinder 2:

Average:

Available Accepted: .000

**Figure 11 - Precast Concrete Results Tab Window**

**Step 3:** To select the **Material Type**, click the *Material Type* field and all applicable selections are displayed.

**Note:** *The items displayed will vary depending upon the report. If no Contract number has been entered, all the material types indicated as FIR – Precast (or whatever report you are in) on the MSG will appear here. If a contract has been entered, the Material and Material Type must be associated to the contract via the CBOM window.*

**Step 4:** Click the desired Material from the drop-down menu choices. The valid Material Types for Precast Concrete include the following:

- ◆ Precast Concrete Reinforced Box Culvert (Both)
- ◆ Precast Concrete Units (English, Metric, Both)
- ◆ Precast/Prestressed Concrete Box Culvert, Crown Span 3-Sided (Both)

**Step 5:** To select the **Material**, click the *Material* field and all applicable selections are displayed. Click the desired Material from the list of all materials associated to the selected material type.



**Step 6:** To select the **Date Made**, click the field and use the **Calendar** tool that is automatically displayed. Double-click the date to select.

**Note:** *The Date Tested value must be equal to or greater than the date made.*

**Step 7:** To set the **Date Tested**, double-click the field and use the **Calendar** tool. Double-click the test date. The Date Tested functions are selected the same as in Date Made.



**Figure 12 - Calendar Tool**

**Note:** *This date field defaults to today's date but can be changed if the actual rating calculations were performed in the field on a previous date, and are only now being entered into HiCAMS.*

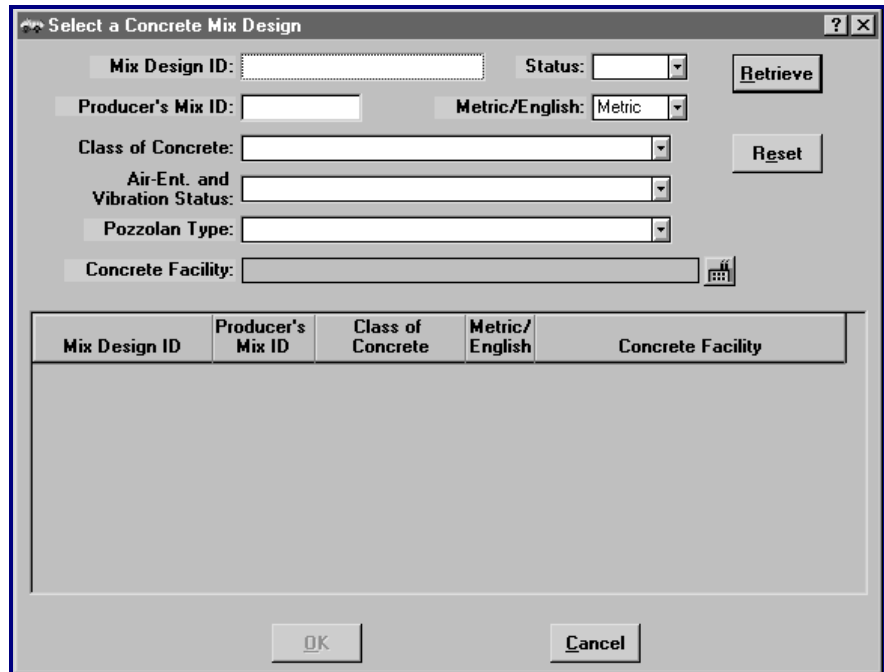
**Step 8:** **Age At Test (in Days)** - this data is the calculated difference between the *Date Made* and *Date Tested* input.

**Step 9:** To enter **Accept** and **Rejected** quantities, select each field and enter the appropriate quantity.

**Step 10:** To select an **Inspection Result**, the drop-down menu and choose an appropriate result from the list.

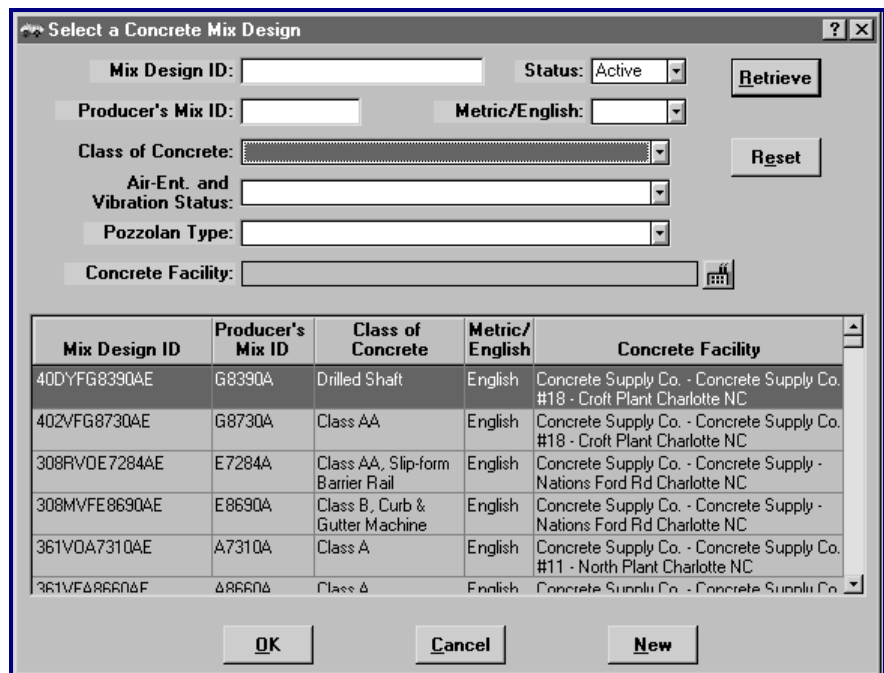
## Concrete Mix Design Selection Window

**Step 11:** To select the **Concrete Mix**, click the  icon to the right of the field and choose the appropriate Concrete Mix listed:



**Figure 13 - Concrete Mix Design selection window**

**Step 12:** To select from all Concrete Mix Design IDs currently in the system, first choose the *Status* (*Active* or *Expired*), then click the **Retrieve** button:



**Figure 14 - Concrete Mix Design, Active Status List**

The Status (Active or Expired) will retrieve mix designs accordingly. The other Retrieve criteria in this window can also be used for selection with any one or all of the following fields:

- ◆ Mix Design ID
- ◆ Producer's Mix ID
- ◆ Metric/English
- ◆ Class of Concrete
- ◆ Air-Entrained And Vibration Status
- ◆ Pozzolan Type
- ◆ Concrete Facility

The Concrete Mix Design ID number is selected from a valid list of Concrete Mix Designs. The list is limited to either Metric or English Mix Designs based on the material's unit of measure.

The Facility Type of the chosen Concrete Mix Design *must correspond* to the Facility of the chosen Producer Supplier.

In the event that the Facility Type and the Producer Supplier's Facility do not correspond while attempting to select a *Concrete Mix Design*, the following message will be displayed:



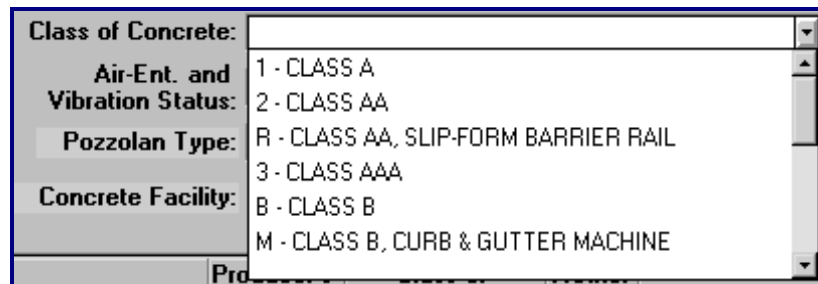
**Figure 15 - Advisory Message**

**Tip:** *If this message appears, select the corresponding Facility Type and the Producer Supplier's Facility and click the Retrieve button from within the Concrete Mix Design window.*

**Step 13:** To retrieve by *Mix Design ID* and/or *Producer's Mix ID*, enter the ID data and click the **Retrieve** button. This will produce a list based upon the ID number.

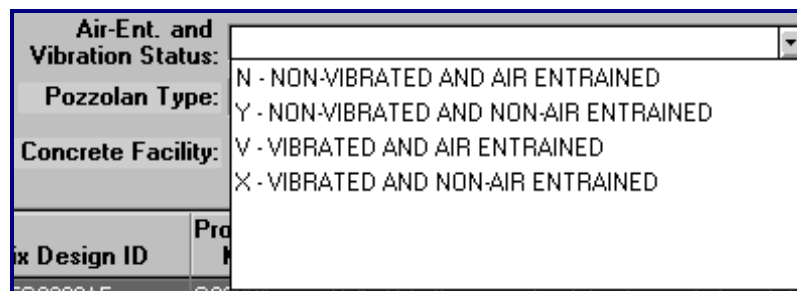
**Tip:** For all of the retrieve selections, the *Reset* button will clear any choices that have been made. This allows re-entry of all data.

**Step 14:** To retrieve by *Class of Concrete*, click the drop-down menu, select from the list, and then click the **Retrieve** button. This will produce a list based upon the class:



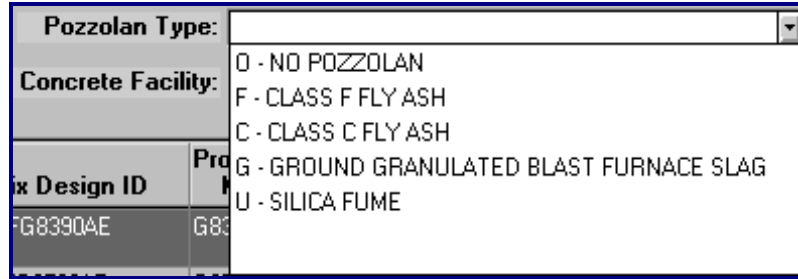
**Figure 16 - Class of Concrete Drop-Down Menu**

**Step 15:** To retrieve by *Air-Ent. and Vibration Status*, click the drop-down menu, select from the list, and then click the **Retrieve** button. This will produce a list based upon this status:



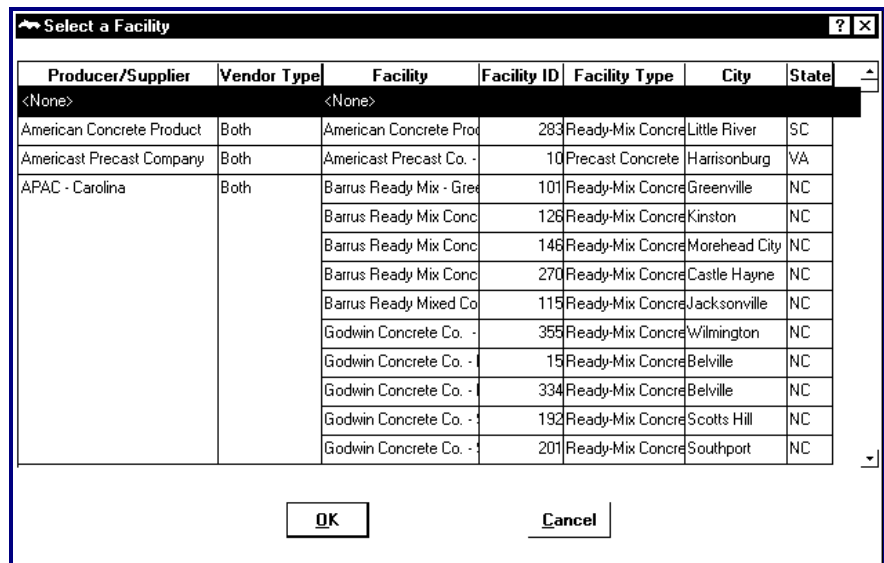
**Figure 17 - Air-Entrained and Vibration Status Drop-Down Menu**

**Step 16:** To retrieve by *Pozzolan Type*, click the drop-down menu, select from the list, and then click the **Retrieve** button. This will produce a list based upon Type of Pozzolan:



**Figure 18 - Pozzolan Type Drop-Down Menu**

**Step 17:** To retrieve by *Concrete Facility*, click the drop-down menu, select from the list, click the **OK** button or double-click the facility to select, and then click the **Retrieve** button. This will produce a list based upon the Facility choice:



**Figure 19 - Select a Facility window (Concrete Facilities)**

**Note:** Individual criteria choices alone or a combination of choices will produce lists based upon that direct input. See populated example below:

**Figure 20 - Populated Concrete Mix Design selection window example**

**Note:** *In the event that any retrieval criteria is not applicable, there may be an advisory message as shown below. If this message appears, click OK, enter the proper retrieval criteria and click the Retrieve button.*

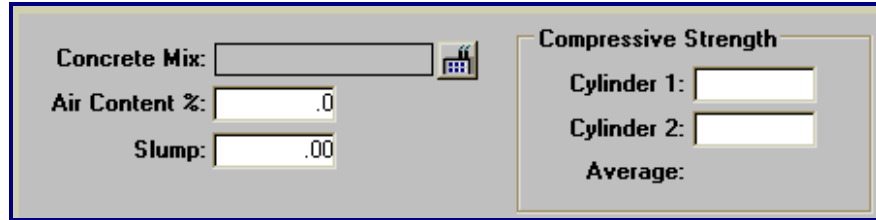


**Figure 21 - Advisory Message for Concrete Mix Design**

**Note:** *After performing facility retrieval, the result is displayed in the Concrete Facility entry field. See example screen below.*

**Figure 22 - Concrete Facility Field**

**Step 18:** In the **Results Tab** window (lower portion), continue the process by entering data for the *Air Content %* field. To enter the **Air Content** percentage, select the field and enter the numeric percentage value. Continue the process with the remaining fields.



The screenshot shows a software interface for recording concrete test results. On the left, there are three input fields: 'Concrete Mix:' with a dropdown menu and a small icon, 'Air Content %:' with a text box containing '.0', and 'Slump:' with a text box containing '.00'. On the right, a box titled 'Compressive Strength' contains three more input fields: 'Cylinder 1:', 'Cylinder 2:', and 'Average:'.

**Figure 23 - Results Tab Window, Lower Portion**

The **Compression Strength** fields for the cylinders must be completed before the inspection result can be set to either “Meets Specs” or “Does Not Meet Specs”. This data may not be known when the record is first entered so these fields are not required to save the record.

The **Average Compression Strength** P.S.I. test will automatically be calculated when the results for Cylinder 1 and Cylinder 2 are entered.

A **Notice of Rejection** is not required for this report. Any material not passing specifications will not receive the official NCDOT stamp and therefore should never be sent to or used on a Contract.

**Step 19:** Save the record, click the **Save** button.

**Tip:** *The saved record captures all data that has been entered and the fields in all tab windows become uneditable. The fields become editable for data entry after the Report's status is changed and the record is re-saved by an authorized user.*

*Saving a record can be performed at any point. If the record save is interrupted at any point, it is usually as a result of incomplete data entry. There are various messages that the system may display based upon what is required to be entered in order to save the record. The following is one such example message.*



**Figure 24 - Typical Advisory Message, Required Information**

**Step 20:** To rectify the saving error, click the **OK** button, enter the required data mentioned in the message, and click the **Save** button.

**Tip:** *Another data entry requirement for saving a Precast Concrete record.... Concrete Design Mix is required and must be entered. The system notifies the user that this is required. See the message below.*



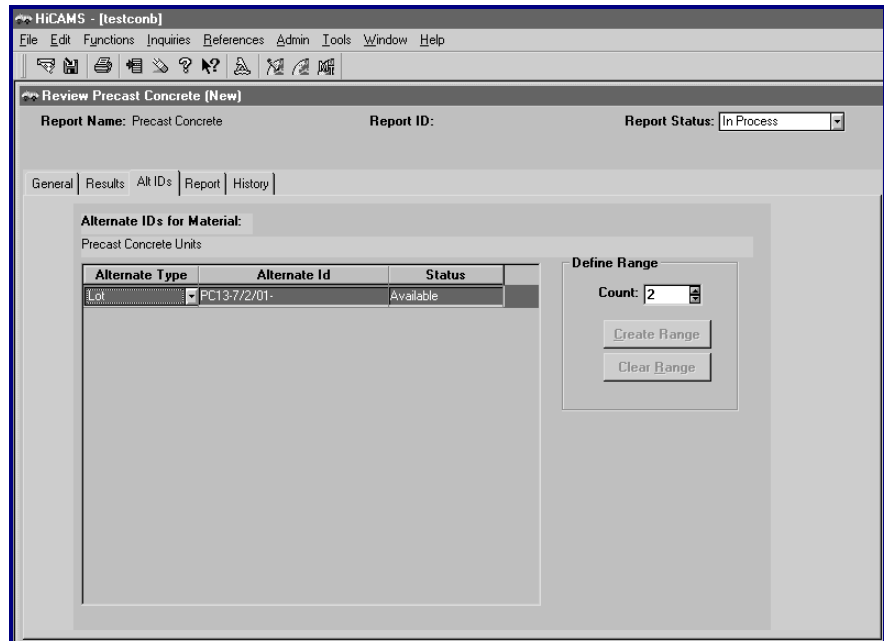
**Figure 25 - Required Information Message**

## Alt IDs Tab - Review Precast Concrete

One or more Alternate IDs may be entered for the material being tested. When inserting a new data row, the Alternate ID defaults to the Plant/Facility ID and the Date Made with the user having the ability to edit this data.

**Step 1:** To enter an **Alternate ID** row on this window, click the **Insert** button. A data entry row is added as shown below:

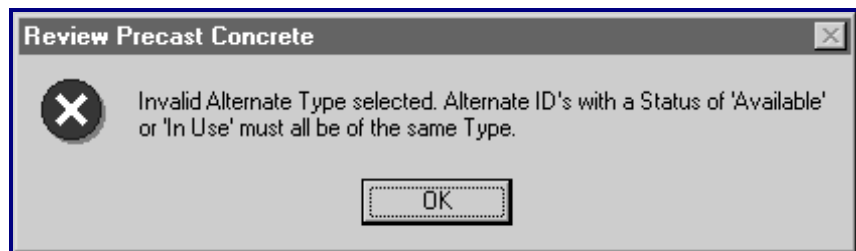




**Figure 26 - Precast Concrete Alt IDs Tab Window**

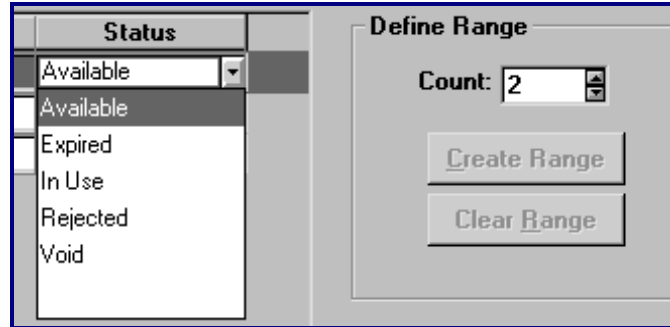
- Step 2:** To delete an **Alternate ID** row, select the appropriate row; click the **Erase** button to delete.
- Step 3:** To select an **Alternate ID Type**, click the drop-down menu or select from the listed choices.

The type will default to “Lot” when first inserting an Alternate ID in this window. An error message could also appear in the case of entering duplicate Alternate IDs:



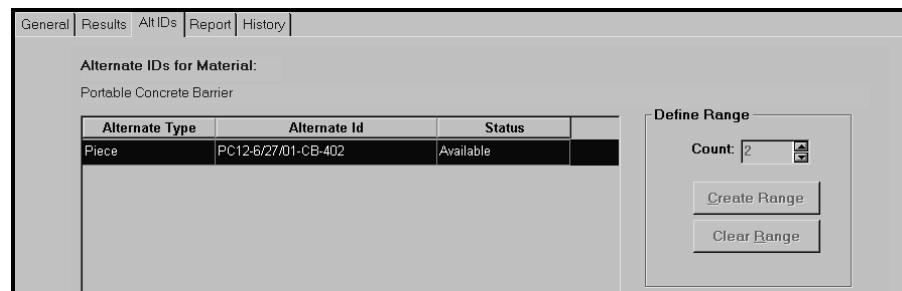
**Figure 27 - Error Message for duplicate Alternate IDs**

- Step 4:** To enter an **Alternate ID** number, select the field and enter an appropriate ID number.
- Step 5:** To change the **Status** from the default of Available, select a listed status as shown in the example below:



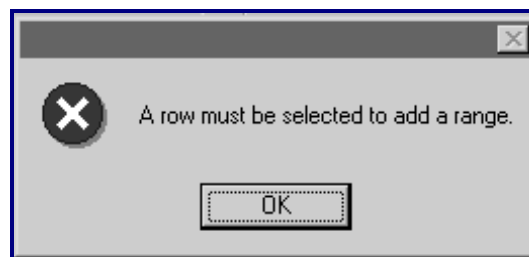
**Figure 28 - Precast Concrete Status Drop-Down Menu**

**Step 6:** Under the **Define Range** area, the **Create** and **Clear** buttons are available to define or delete a Range for *Alternate Types/Alternate IDs*.



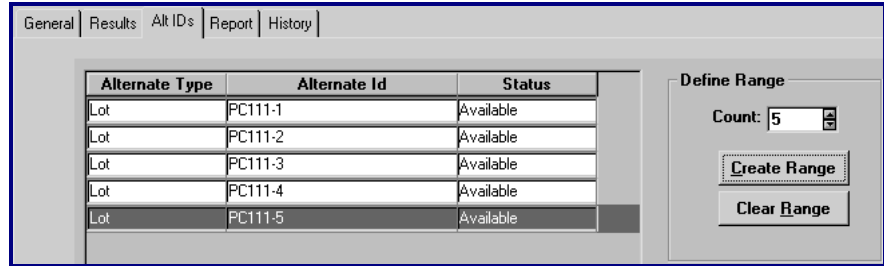
**Figure 29 - Entering a Numeric Suffix for a Range**

To create a range, click the *Alternate ID* field to the right of the number and add a numeric suffix to start a range to be specified by the count. If a row is not selected when *Creating a Range*, the following error message will be displayed:



**Figure 30 - Error message, Add a Range**

**Step 7:** To specify the **Count** for the range, click the up/down arrows or enter the amount in the field and click the **Create Range** button. The Range is then created as shown in the example below:



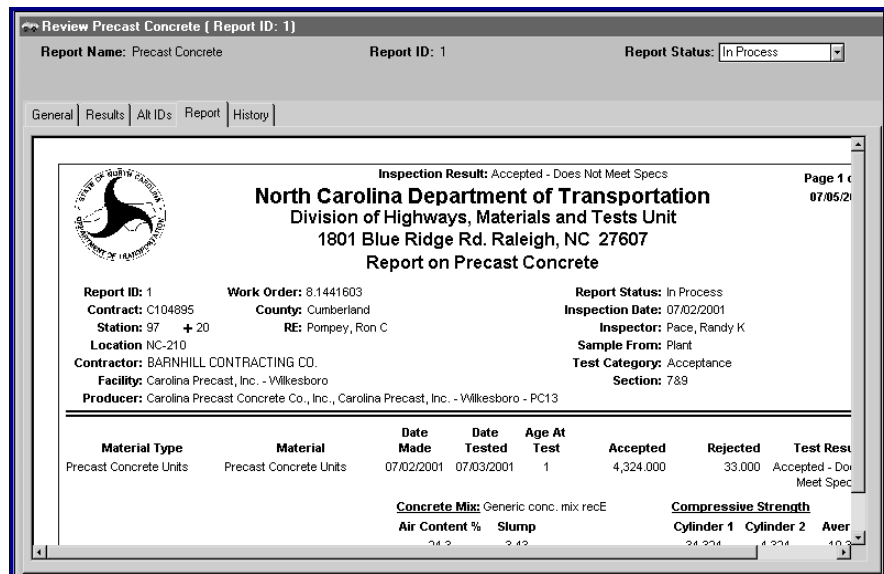
**Figure 31 - Precast Concrete Create Range**

**Step 8:** To clear the range, click the **Clear Range** button.

### Report Tab - Review Precast Concrete

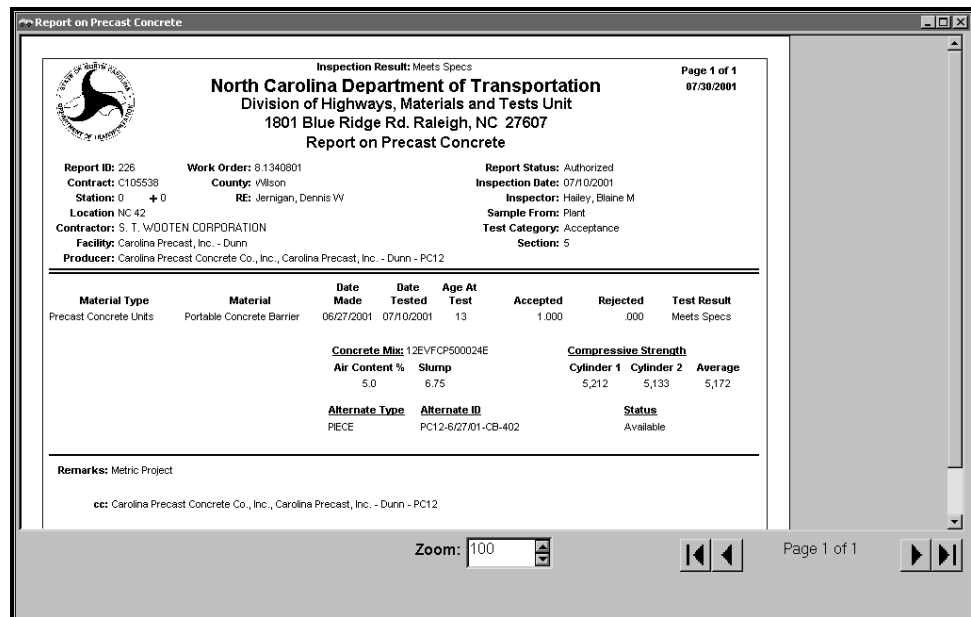
The Precast Concrete Report is under the **Report** tab.

**Step 1:** To view the entire report, use the scroll bars or use **Print Preview**.



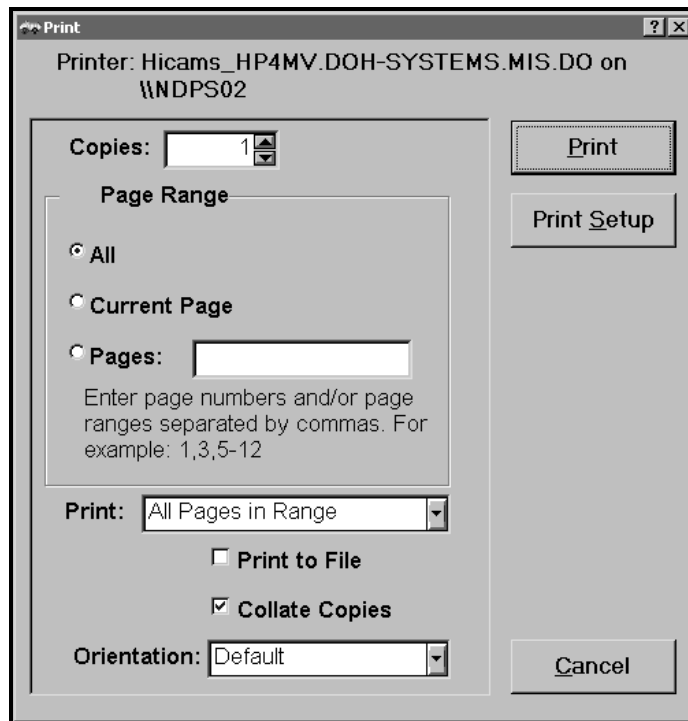
**Figure 32 - Precast Concrete Report Tab Window**

**Step 2:** To print the report, click the **Print** icon on the toolbar. HiCAMS will generate a printable version of the report. The Report on PreCast Concrete window will display:



**Figure Figure 33 - Report on Precast Concrete**

**Step 3:** Click the print icon once again to print the report. The Print setup window will display. Click the **Print** button to print the report:



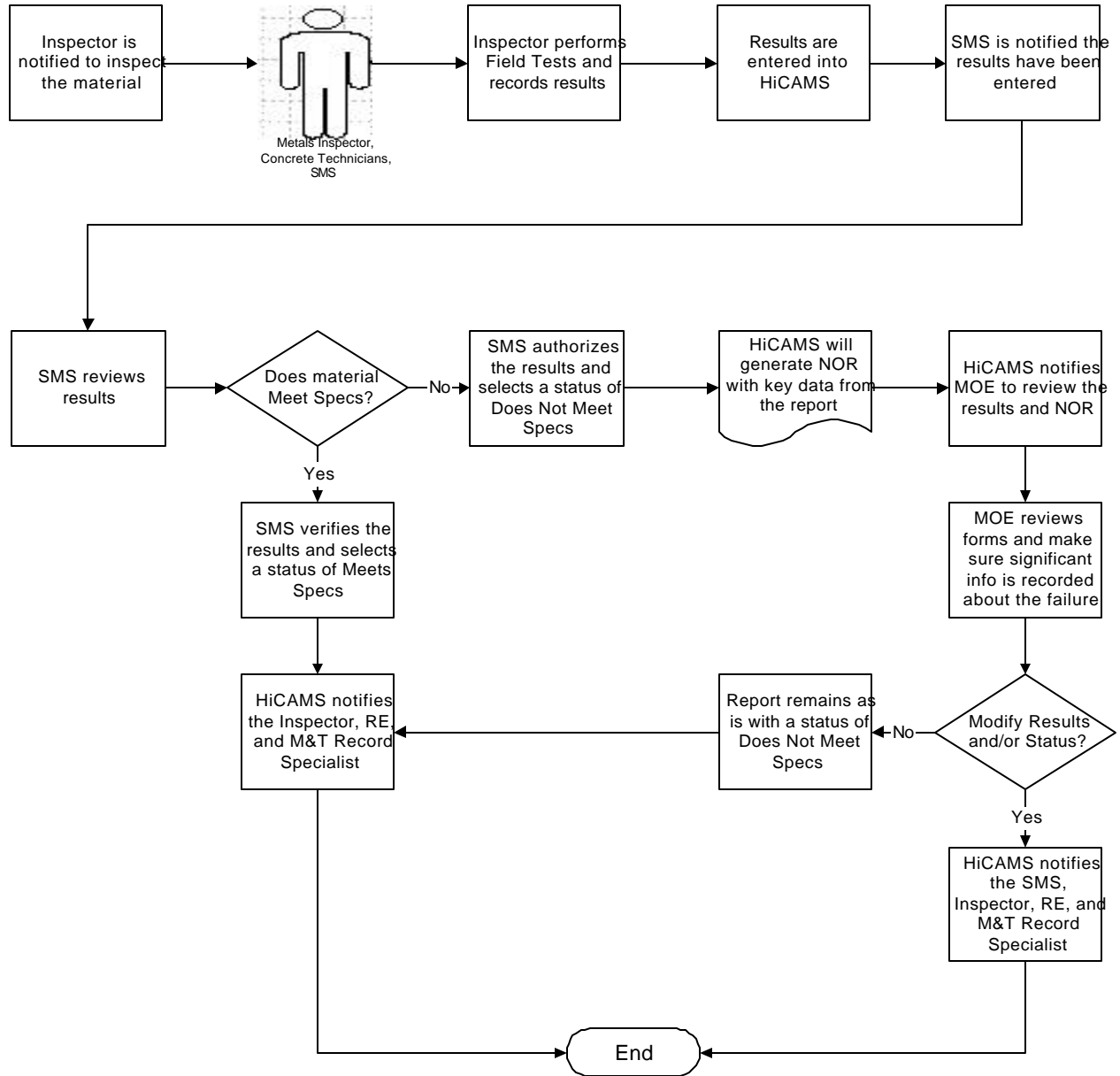
## History Tab - Review Precast Concrete

Actions that have been performed for an individual report are listed located under the **History** tab. The historical information includes the *Action*, *Action Date/Time*, *Status*, and *Who* performed the action. This area also includes comments that may have been entered during Precast Concrete processing. To view the individual comments for each action, click the appropriate row. See example below:



**Figure 34 - Precast Concrete History Tab Window**

REPORT ON PRECAST CONCRETE PROCESS FLOW



MOE - Materials Operation Engineer  
RE - Resident Engineer  
SCE - State Construction Engineer  
SMS - Section Material Specialist

