HLA GENOTYPING LABORATORY SYSTEM
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I. INTRODUCTION

The purpose of this chapter is to provide detailed instructions to the HLA Genotyping Laboratories for the HLA Laboratory System used in the Type 1 Diabetes Genetics Consortium (T1DGC). The information that follows also will be useful to the DNA Repositories and should guide staff at each critical point in the shipment and receipt of DNA specimens. It is crucial to the success of the T1DGC that all staff involved, directly or indirectly, follows the outlined procedures.

II. SHIPMENTS FROM DNA REPOSITORY TO HLA GENOTYPING LABORATORY

A. Completing DNA Shipping Forms at DNA Repository

1. The DNA Repository staff completes a *DNA Repository Shipping Form – Face Sheet: Shipments to the HLA Genotyping Laboratory* when shipping specimens to the HLA Genotyping Laboratory. This form is posted on the T1DGC web site (https://www.t1dgc.org) on the Data Collection Forms page (under the link titled General Study Documents).

2. For DNA shipments to the HLA Genotyping Laboratory, the DNA Repository staff will complete the left portion of the *DNA Repository Shipping Form – Face Sheet: Shipments to the HLA Genotyping Laboratory.* The *Contents Sheet* is generated online as the bar-coded participant ID labels are scanned. A paper copy of this form will be printed after all IDs have been scanned and saved. Both the completed *Face Sheet* and the printed *Contents Sheet* are included in the shipping container.

3. The DNA Repository staff affixes a bar-coded DNA shipping ID label on the *Face Sheet* and the shipping container. DNA shipping IDs identify each unique shipment and are associated with a set of participant IDs through the *Contents Sheet*. DNA shipping IDs are 11-digit numbers that begin with the network identified (*i.e.,* 1=Asia-Pacific; 2=European; 4=North American; and 5=United Kingdom). **The system for entry of the *DNA Shipping Forms* cannot be accessed without a DNA Shipping ID label on the *Face Sheet*.**

Sequential bar-coded shipment ID labels are provided by the T1DGC Coordinating Center. Each sheet has 10 unique shipping IDs, with three labels printed for each shipping ID. Only two of the labels are used for each shipment; one label is placed on the *DNA Repository Shipping Form – Face Sheet* and another identical label will be placed on the shipping container for the samples. The third label can be used if one of the labels tears; otherwise, **the extra label should be discarded after shipping**. Alternatively, this label may be used for an internal log, but **should not be used for subsequent shipments**.

4. The DNA Repository staff completes the upper portion of the *Face Sheet* with the following information:
   a. full address of the HLA Genotyping Laboratory (receiving laboratory) and the DNA Repository (shipping laboratory) printed or typed in the allotted space;
   b. DNA Shipping ID Label in the designated space on the form (and a second identical DNA Shipping ID Label on the shipping container);
   c. courier or shipping company used (*e.g.*, Federal Express or World Courier) and the reference or tracking number;
   d. type of shipment (*i.e.*, original sample shipment or replacement sample shipment); and
   e. name of the DNA Repository contact and his/her phone number.

5. The DNA Repository staff completes the left side of the lower portion of the *Face Sheet* with the following information:
   a. DNA Repository ID;
   b. date and time the shipment was packed at the DNA Repository;
   c. total number of samples packed, confirmed by counting the samples; and
   d. initials of person packing the samples and completing the shipping form.

6. The DNA Repository staff data enters the information completed on the *Face Sheet.*

7. The DNA Repository staff generates the *Contents Sheet* online by scanning the bar-coded participant ID labels.

8. The system will automatically fill in that one DNA aliquot per participant is included in the shipment to the HLA Genotyping Laboratory.

9. Once the DNA Repository has entered and saved the *Contents Sheet*, the DNA Repository user should print all *DNA Repository Shipping Form – Contents Sheets*. The staff should make two copies of the *Face Sheet* and *Contents Sheet.* The **original set** of shipping forms is sent to the Coordinating Center. One set is included in the shipment and one is retained by the DNA Repository for their records.

B. Completing DNA Shipping Forms at HLA Genotyping Laboratory

1. When the shipment is received at the HLA Genotyping Laboratory, verify contents of the shipment and record the specified information on the lower right portion of the *Face Sheet*. The following items are recorded and entered into the specimen tracking system by the person receiving the shipment:
   a. HLA Genotyping Laboratory ID;
   b. date and time the shipment arrived at the HLA Genotyping Laboratory;
   c. total number of samples received, confirmed by counting the samples; and
   d. initials of person receiving the samples and completing the shipping form.

2. Check the participant ID for each sample against the *Contents Sheet* and enter the number “1” for each DNA aliquot in the column labeled “DNA aliquot received” for inventory purposes and acknowledgement of receipt.

3. If a DNA aliquot vial is leaking, record the total number of samples received and mark the box in the column labeled “Samples Leaking.”

4. If there are other discrepancies in the number of samples shipped or irregularities in the condition of the sample, mark the box in the column labeled “Other.” Record any specific comments in the margin of the printed form.

5. Once the HLA Genotyping Laboratory has entered and saved the *Contents Sheet*, the Genotyping Laboratory user should print all *DNA Repository Shipping Form – Contents Sheets*. The staff should make a copy of the *Face Sheet* and *Contents Sheet.* The **original set** of shipping forms is sent to the Coordinating Center and the copy is retained by the HLA Genotyping Laboratory for their records.

III. SHIPMENTS FROM HLA GENOTYPING LABORATORY TO CHORI

Samples with genotyping ambiguities to be resolved must be shipped from HLA Genotyping Laboratories in the Asia-Pacific and European Networks to the North American Genotyping Laboratory (located at CHORI). Samples are batch shipped after all samples have been genotyped initially in each of the networks.

A. Completing HLA Genotyping Laboratory Shipping Forms at Shipping Laboratory

1. The shipping HLA Genotyping Laboratory staff completes a *HLA Genotyping Laboratory Shipping Form – Face Sheet: Shipments to the CHORI* when shipping specimens to CHORI. This form is posted on the T1DGC web site (http://www.t1dgc.org) on the Data Collection Forms page (under the link titled General Study Documents).

2. For DNA samples from the Network HLA Genotyping Laboratories to CHORI, the shipping HLA Genotyping Laboratory staff will complete the left portion of the *HLA Genotyping Laboratory Shipping Form – Face Sheet: Shipments to the CHORI.* The *Contents Sheet* is generated online as the bar-coded participant ID labels are scanned. A paper copy of this form will be printed after all IDs have

been scanned and saved. Both the completed *Face Sheet* and the printed *Contents Sheet* are included in the shipping container.

3. The shipping HLA Genotyping Laboratory staff affixes a bar-coded HLA Shipping ID label on the *Face Sheet* and the shipping container. HLA shipping IDs identify each unique shipment and are associated with a set of participant IDs through the *Contents Sheet*. HLA shipping IDs are 11-digit numbers that begin with the network identified (*i.e.,* 1=Asia-Pacific; 2=European; 4=North American; and 5=United Kingdom). **The system for entry of the *HLA Genotyping Laboratory Shipping Forms* cannot be accessed without a HLA Shipping ID label on the *Face Sheet*.**

   Sequential bar-coded shipment ID labels are provided by the T1DGC Coordinating Center. Each sheet has 10 unique shipping IDs, with three labels printed for each shipping ID. Only two of the labels are used for each shipment; one label is placed on the *HLA Genotyping Laboratory Shipping Form – Face Sheet* and another identical label will be placed on the shipping container for the samples. The third label can be used if one of the labels tears; otherwise, **the extra label should be discarded after shipping**. Alternatively, this label may be used for an internal log, but **should not be used for subsequent shipments**.

4. The shipping HLA Genotyping Laboratory staff completes the upper portion of the *Face Sheet* with the following information:
   a. full address of the HLA Genotyping Laboratory (shipping laboratory) printed or typed in the area allotted;
   b. HLA Shipping ID Label in the designated space on the form (and a second identical HLA Shipping ID Label on the shipping container);
   c. courier or shipping company used (*e.g.*, Federal Express or World Courier) and the reference or tracking number;

d. name of the shipping HLA Genotyping Laboratory contact and his/her phone number.

5. The shipping HLA Genotyping Laboratory staff completes the left side of the lower portion of the *Face Sheet* with the following information:
   a. HLA Genotyping Laboratory ID;
   b. date and time the shipment was packed at the HLA Genotyping Laboratory;
   c. total number of samples packed, confirmed by counting the samples; and
   d. initials of person packing the samples and completing the shipping form.

6. The shipping HLA Genotyping Laboratory staff data enters the information completed on the *Face Sheet.*

7. The DNA Repository staff generates the *Contents Sheet* online by scanning the bar-coded participant ID labels.

8. The system will automatically fill in that 1 DNA aliquot per participant is included in the shipment to the HLA Genotyping Laboratory.

9. Once the shipping HLA Genotyping Laboratory has entered and saved the *Contents Sheet*, the DNA Repository user should print all *HLA Genotyping Laboratory Shipping Form – Contents Sheets*. The staff should make two copies of the *Face Sheet* and *Contents Sheet.* The **original set** of shipping forms is sent to the Coordinating Center. One set is included in the shipment and one is retained by the shipping HLA Genotyping Laboratory for their records.

B. Completing Genotyping Laboratory Shipping Forms at CHORI (Receiving HLA Genotyping Laboratory)

1. When the shipment is received at CHORI (receiving HLA Genotyping Laboratory), verify contents of the shipment and record the specified information on the lower right portion of the *Face Sheet*. The following items are recorded and entered into the specimen tracking system by the person receiving the shipment:
   a. HLA Genotyping Laboratory ID;
   b. date and time the shipment arrived at CHORI;
   c. total number of samples received, confirmed by counting the samples; and
   d. initials of person receiving the samples and completing the shipping form.

2. Check the participant ID for each sample against the *Contents Sheet* and enter the number "1" for each DNA aliquot in the column labeled "DNA aliquot received" for inventory purposes and acknowledgement of receipt.

3. If there are other discrepancies in the number of samples shipped or irregularities in the condition of the sample, contact the shipping HLA Genotyping Laboratory and the T1DGC Coordinating Center. Record any specific comments in the margin of the printed form.

4. Once the receiving HLA Genotyping Laboratory has entered and saved the *Contents Sheet*, the receiving HLA Genotyping Laboratory user should print all *HLA Genotyping Laboratory Shipping Form – Contents Sheets*. The staff should make a copy of the *Face Sheet* and *Contents Sheet.* The **original set** of shipping forms is sent to the Coordinating Center and the copy is retained by CHORI for their records.

IV. T1DGC HLA LABORATORY SYSTEM

A. Web Site

The HLA Genotyping Laboratory user must access the T1DGC data entry site (https://www.t1dgcdataentry.org). The T1DGC bar-code scanner and a computer with an Internet connection and compatible browser (*e.g.*, Internet Explorer 5.5.2 or higher version) are required to use this web-based system.

B. Login Page

1. When the HLA Genotyping Laboratory user accesses the web site, the first page encountered is the Login Page (Figure 1).

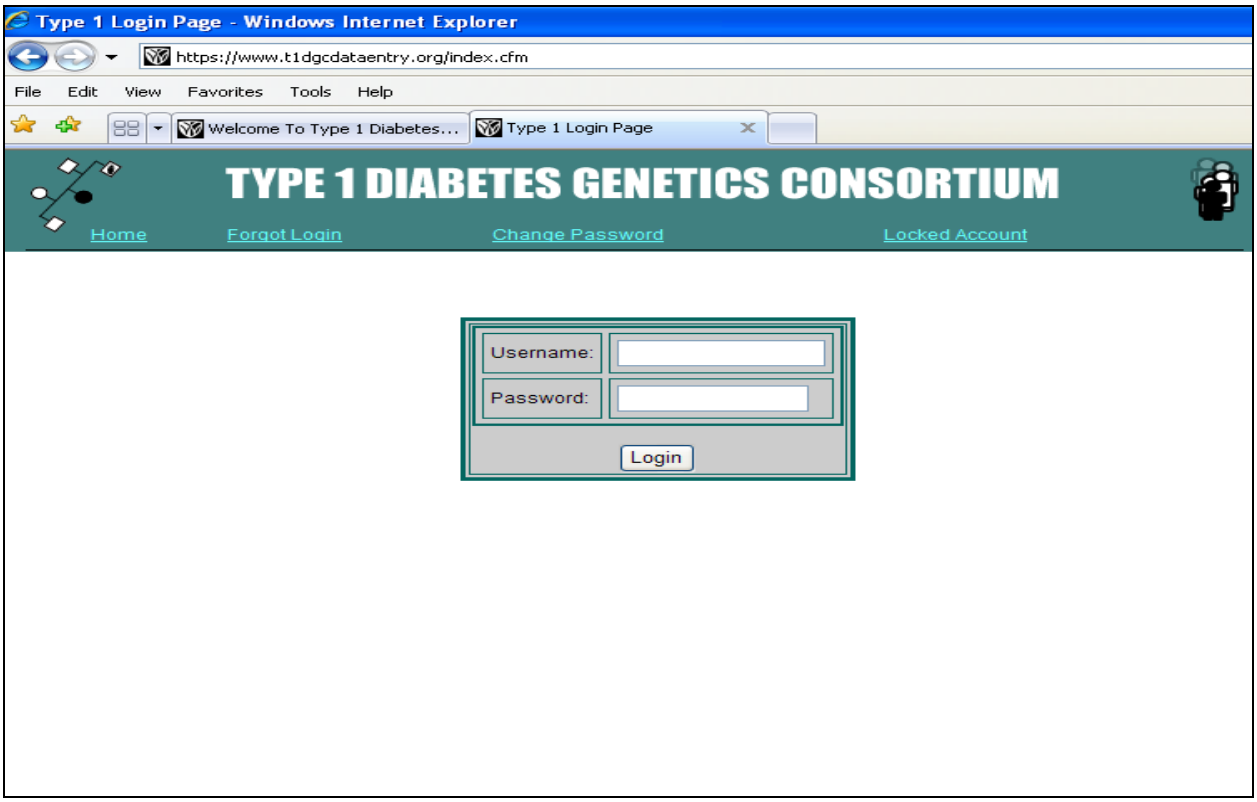


Figure 1. Data entry system login page.

2. Each laboratory staff member is assigned a unique username and password to be used to access the system. The username and password are entered on the Login Page.

C. T1DGC HLA Laboratory System Home Page

1. Upon a successful log-in, the T1DGC HLA Laboratory System Home Page will be displayed (Figure 2).

Figure 2. HLA laboratory system home page.

2. From this page, HLA Genotyping Laboratory users have several options:

   a. *Receipts*

      i. **DNA Shipping Form**: enter (or review previously entered) *DNA Repository Shipping Forms: Face Sheet* and/or *Contents Sheet*;

      ii. **HLA Genotyping Shipping Form**: enter (or review previously entered) *HLA Genotyping Laboratory Shipping Forms: Face Sheet* and/or *Contents Sheet*; or

      iii. **Ethnicity Report**: generate the ethnicity information for participants on a specified Master Plate Grid.

   b. *Plate Management*

      i. **Master Plate Grid**: create a Master Plate Grid from eligible shipping IDs;

      ii. **Master Plate Grid Report**: print a copy of the Master Plate Grid;

      iii. **Sub-typing Plate Grid**: create a Sub-typing Plate Grid (or multiple plates) from a specified Master Plate Grid;

      iv. **Sub-typing Plate Grid Report**: print a copy of the Sub-typing Plate Grid and associated Master Plate Grid for a specified Sub-typing Plate Grid;

      v. **Sub-typing Plate Grid Details Report**: print a list of the all Sub-typing Plate Grids and assay, well assignment and participant IDs, for a specified Master Plate Grid;

      vi. **Sub-typing-to-Master Grid Report:** print the Sub-typing Plate Grid with the Master Plate Grid well assignment beneath each participant ID and assay;

      vii. **Redo Plate Grid:** create a Redo Plate Grid;

      viii. **Redo Plate Grid Report:** print a copy of the Redo Plate Grid and associated Parent Plate Grid for a specified Redo Plate Grid;

      ix. **Redo-to-Parent Plate Grid Report:** print the Redo Plate Grid with the Parent Plate Grid well assignment beneath each participant ID and locus;

x. **Cancel Plate Grid:** used on rare occasions to cancel a specified Master Plate Grid, Sub-typing Plate Grid, and/or Redo Plate Grid; or

xi. **HLA Sample File Download**: download the text files used in StripScan (for a specified plate grid);

c. *Data Management*

i. **HLA File Upload**: upload data (xml file) from SCORE to the Coordinating Center via the web (test file and final upload);

ii. **Probe Binding Report**: download report containing the probe binding and pixel value results for each assay;

iii. **HLA Laboratory Shipment Report**: view and print report containing comprehensive information about each plate including date received, number of redos, status, and links to associated sub-typing and master plate grids;

iv. **HLA Laboratory Grid Report**: view and print report containing information about the status of each plate logged into the HLA Laboratory System; or

v. **T1DGC HLA Plate Status**: view and print report summarizing all plates logged into the HLA Laboratory System;

d. *Administration*

i. **HLA Software Support**: download updated versions of SCORE or StripScan;

ii. **Request for Replacement**: request a replacement sample or view list of all requested replacement samples; or

iii. **HLA StripScan File Upload**: upload StripScan files to the Coordinating Center via the web.

3. The HLA Genotyping Laboratory user can always return to this page by clicking on the “HLA Lab” link at the top of the page.

D. DNA Shipping Form

1. Clicking on the "DNA Shipping Form" link will display a page with a box titled "Enter or Scan a DNA Shipping ID" (Figure 3). Position the cursor in the box.

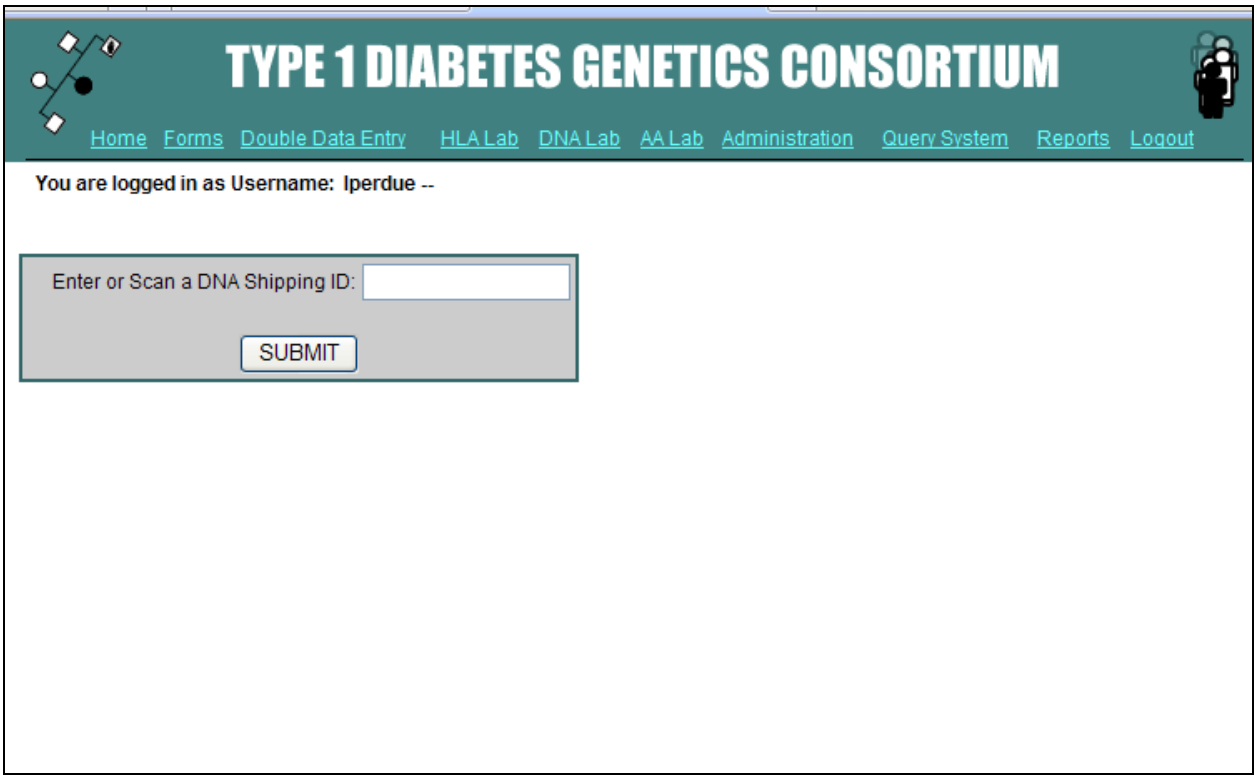


Figure 3. Scan DNA shipping ID from bar-coded labels.

2. Scan the bar-coded DNA shipping ID label located on the *Face Sheet*. The ID must be 11 digits and should start with the Network identifier (*i.e.*, 1=Asia-Pacific; 2=European; 4=North American; and 5=United Kingdom). **The system for entry of the *DNA Shipping Form* cannot be accessed without a DNA Shipping ID label on the *Face Sheet.***

3. After scanning the DNA shipping ID, press "Submit" to proceed.

4. DNA Shipping Form Selection Page

   a. When the HLA Genotyping Laboratory user enters a DNA shipping ID, the DNA Shipping Form Selection Page will appear (Figure 4).

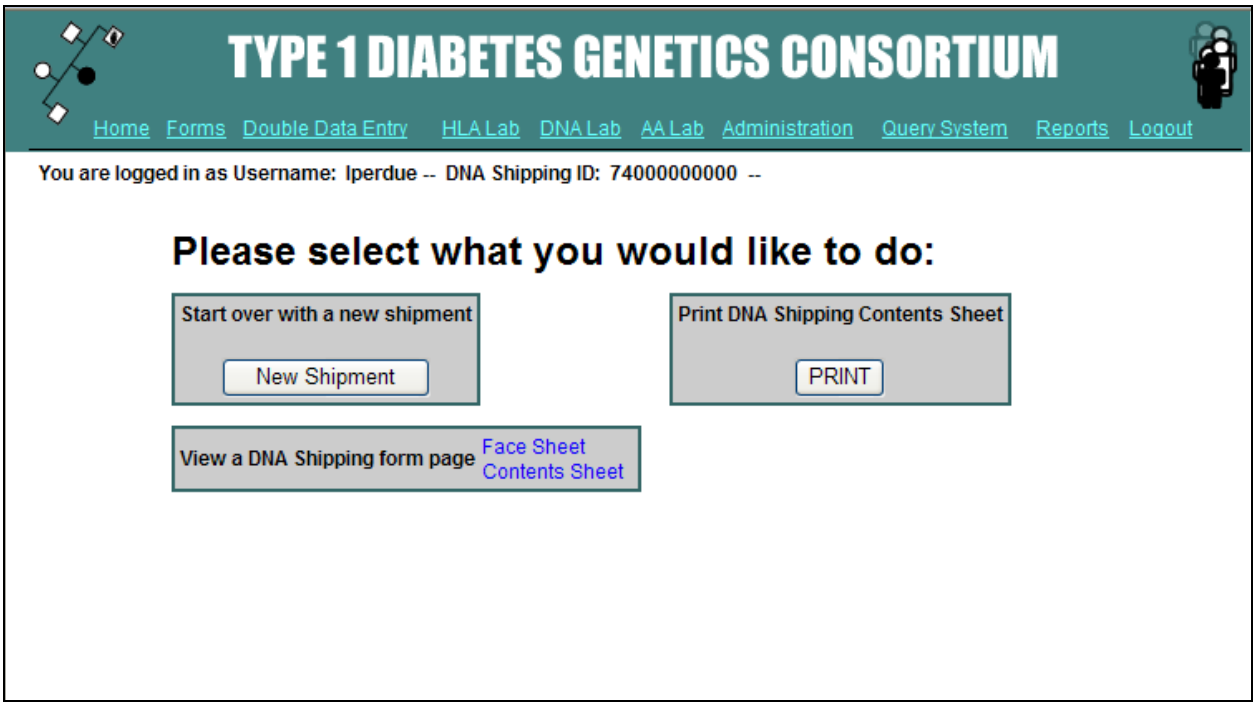


Figure 4. *DNA Shipping Form* selection page.

b. If a shipment has not been entered, a blank *DNA Shipping Form - Face Sheet* will be displayed. This should not occur if the DNA Repository entered the data recorded on the form at the time of shipment. If a blank *Face Sheet* is displayed, the HLA Genotyping Laboratory should enter the **entire** form and contact the Coordinating Center who will in turn contact the DNA Repository to ensure that this does not occur in future shipments.

c. The HLA Genotyping Laboratory user has three options from this page:

   i. "Start over with a new shipment" which returns the HLA Genotyping Laboratory user to the screen with the box titled "Enter or Scan a DNA Shipping ID".

   ii. "Print DNA Shipping Contents Sheet" which displays what is currently saved in the database on the *Contents Sheet* and allows the HLA Genotyping Laboratory user to print this information.

   iii. "View a DNA Shipping Form Page" which displays previously entered shipping forms and what is currently saved in the database for the *Face Sheet* or *Contents Sheet*.

d. The HLA Genotyping Laboratory user will select option (iii) in order to data enter the part of the *DNA Shipping Form* they completed after receipt of samples.

5. *DNA Shipping Form – Face Sheet*

a. The DNA Repository staff will enter the data recorded on the *DNA Repository Shipping Forms* at the time of receipt of the shipment. When the HLA Genotyping Laboratory staff scans the DNA shipping ID and selects Face Sheet, the *Face Sheet* displayed will be populated with the data entered at the DNA Repository (Figure 5).

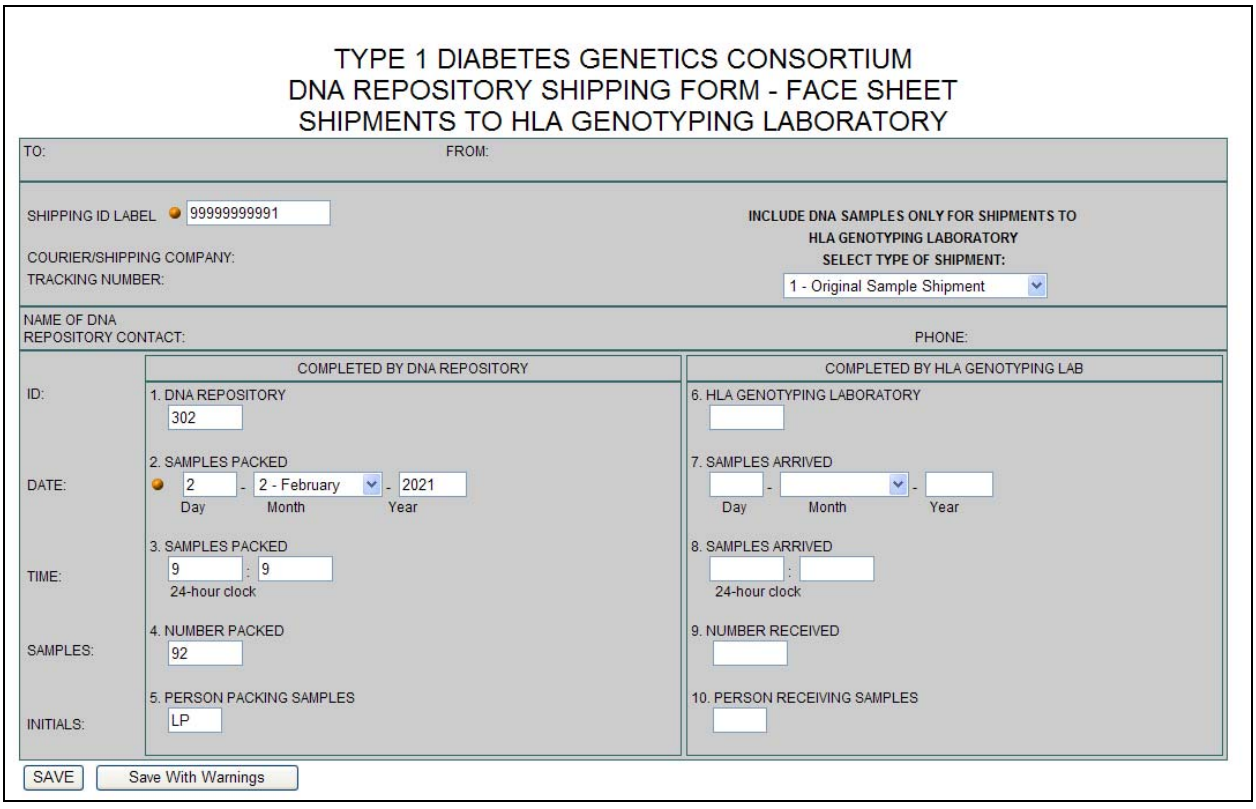


Figure 5. *DNA Shipping Form – Face Sheet.*

b. Enter the right side of the lower portion of the form (titled “Completed by HLA Genotyping Lab”) and press the “Save” button at the bottom of the page.

6. *DNA Shipping Form – Face Sheet* Warnings and Errors

   a. Warnings (Orange Dots):

      i. If data entered are out of an “expected” range, the form is redisplayed with an orange dot at the top describing the potential mistake (Figure 6).

      ii. Confirm that the data on the form matches that entered on the web page.

      iii. If the data match, scroll to the bottom and press the “Save with Warnings” button. If the data do not match, correct the erroneous data and press the “Save” button.

      iv. HLA Genotyping Laboratory staff **cannot and should not** correct data on shipping forms that were entered by the DNA Repository staff without consulting the DNA Repository.

   b. Errors (Red Dots):

      i. If data entered are out of an “expected” range or the data field is blank and the field is **required**, the form is redisplayed with a red mark at the top describing the potential error (Figure 6).

      ii. Confirm that the data on the form matches that entered on the web page.

      iii. If the data match and are valid, the Coordinating Center should be contacted. If the data do not match, correct the erroneous data and press the “Save” button.

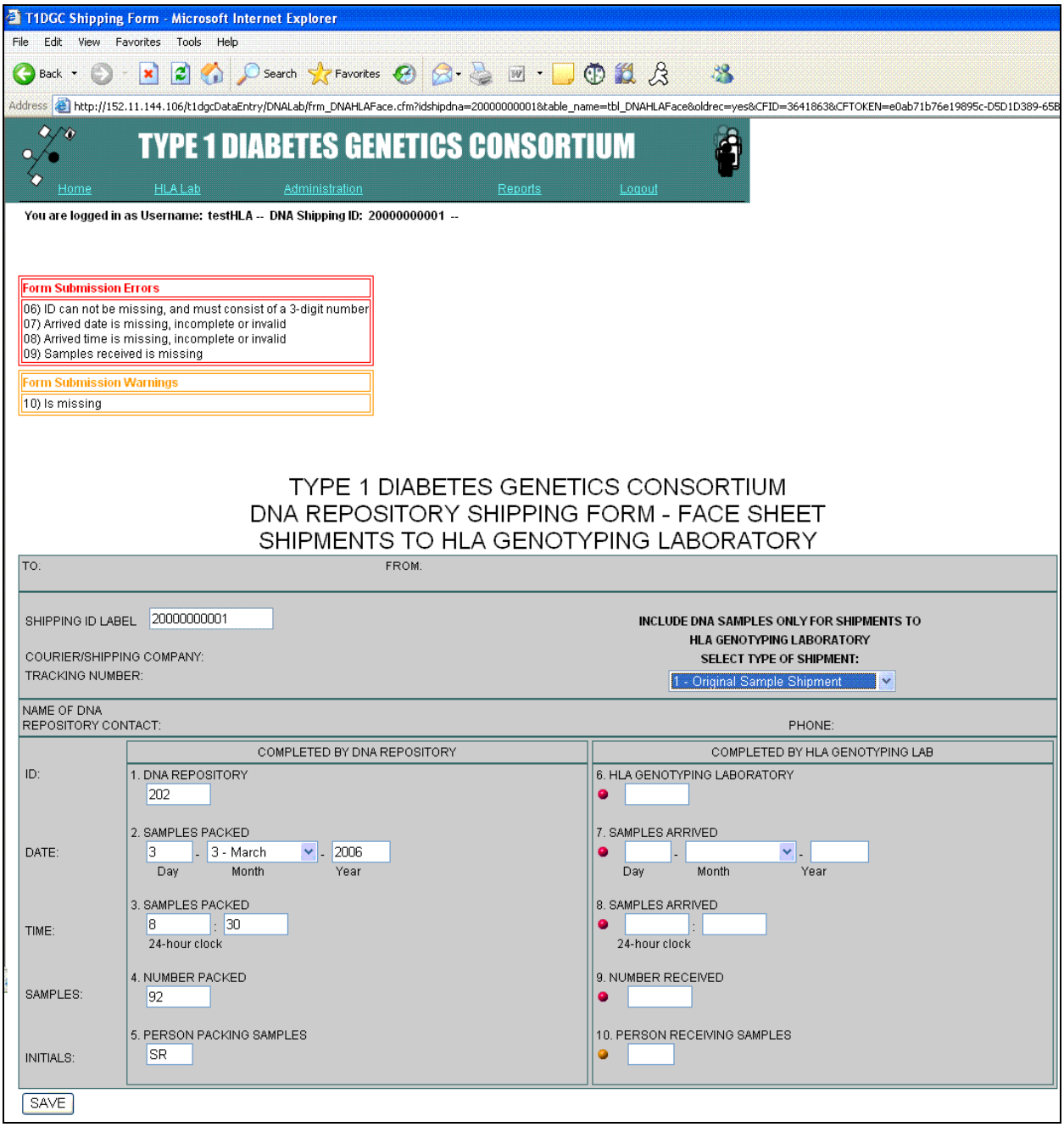


Figure 6. *DNA Shipping Form – Face Sheet* with warnings and errors.

7. *DNA Shipping Form – Contents Sheet*

   a. After a successful save of the *Face Sheet*, the HLA Genotyping Laboratory is redirected back to the Shipping Form Selection Page (Figure 4).

b. The HLA Genotyping Laboratory user selects “View a DNA Shipping Form page” *Contents Sheet* and the *Contents Sheet* is displayed (Figure 7). This should be populated with the data entered at the DNA Repository at the time of shipment. If the *Contents Sheet* is blank, the HLA Genotyping Laboratory user should enter the **entire** form and contact the Coordinating Center who will in turn contact the DNA Repository to ensure that this does not occur in future shipments.

c. Enter the data recorded in the column labeled “DNA aliquots received” and mark any comments recorded on the form about the receipt of the DNA aliquots. Press the “Save” button at the top or bottom of the page.

d. The HLA Genotyping Laboratory user will be unable to save the *Contents Sheet* if any field is left blank. (*i.e.,* if an aliquot is not received, the HLA Genotyping Laboratory user must enter “0” in the field rather than leaving the field blank.)

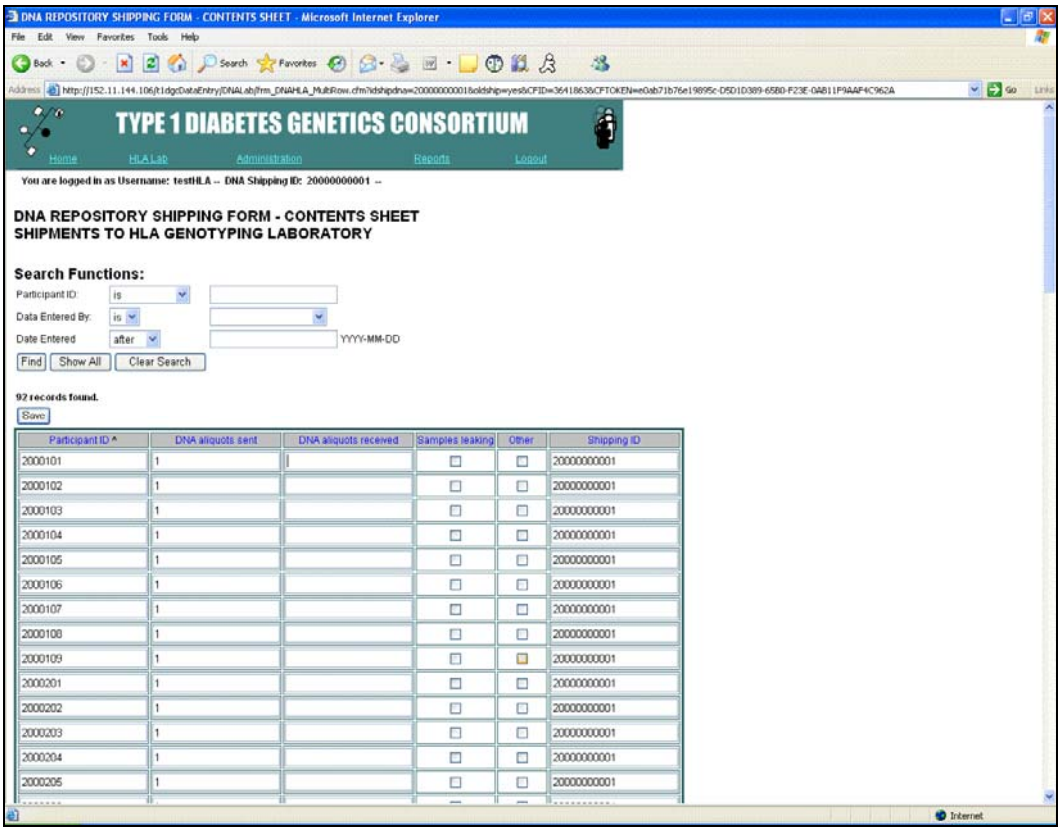


Figure 7. ***DNA Shipping Form – Contents Sheet.***

E. HLA Genotyping Shipping Form

Entry of the *HLA Genotyping Laboratory Shipping Form* is similar to entry of the *DNA Shipping Form: Shipments to HLA Genotyping Laboratory*. See Section III, Shipments from HLA Genotyping Laboratory to CHORI, for instructions in completing this form. The shipping HLA Genotyping Laboratory will complete and enter the left side of the *Face Sheet* and scan the participant IDs of the samples that are being shipped onto the *Contents Sheet*. The receiving HLA Genotyping Laboratory (CHORI) will complete and enter the right side of the *Face Sheet* and confirm receipt of samples by entering the number of DNA aliquots received on the *Contents Sheet*.

1. Clicking on the "HLA Genotyping Shipping Form" link will display a page with a box titled "Enter or Scan a HLA Shipping ID." Position the cursor in the box.

2. Scan the bar-coded HLA shipping ID label located on the *Face Sheet*. The ID must be 11 digits and should start with the Network identifier (*i.e.*, 1=Asia-Pacific; 2=European; 4=North American; and 5=United Kingdom). **The system for entry of the *HLA Genotyping Laboratory Shipping Form* cannot be accessed without a HLA Shipping ID label on the *Face Sheet.***

3. After scanning the HLA shipping ID, press "Submit" to proceed.

Shipping HLA Genotyping Laboratory ONLY

4. If the shipment has not been entered, a blank *HLA Genotyping Laboratory Shipping Form – Face Sheet* will be displayed. The shipping HLA Genotyping Laboratory should enter the left side of the lower portion of the form (titled "Completed by Shipping HLA Lab") and press the "Save" button at the bottom of the page.

5. *HLA Genotyping Laboratory Shipping Form – Face Sheet* Warnings and Errors

   a. Warnings (Orange Dots):

      i. If data entered are out of an “expected” range, the form is redisplayed with an orange dot at the top describing the potential mistake.

      ii. Confirm that the data on the form matches that entered on the web page.

      iii. If the data match, scroll to the bottom and press the “Save with Warnings” button. If the data do not match, correct the erroneous data and press the “Save” button.

   b. Errors (Red Dots):

      i. If data entered are out of an “expected” range or the data field is blank and the field is **required**, the form is redisplayed with a red mark at the top describing the potential error.

      ii. Confirm that the data on the form matches that entered on the web page.

      iii. If the data match and are valid, the Coordinating Center should be contacted. If the data do not match, correct the erroneous data and press the “Save” button.

6. Once the *Face Sheet* has been entered, the Shipping HLA Genotyping Laboratory user will be directed to the *Contents Sheet* (Figure 8).

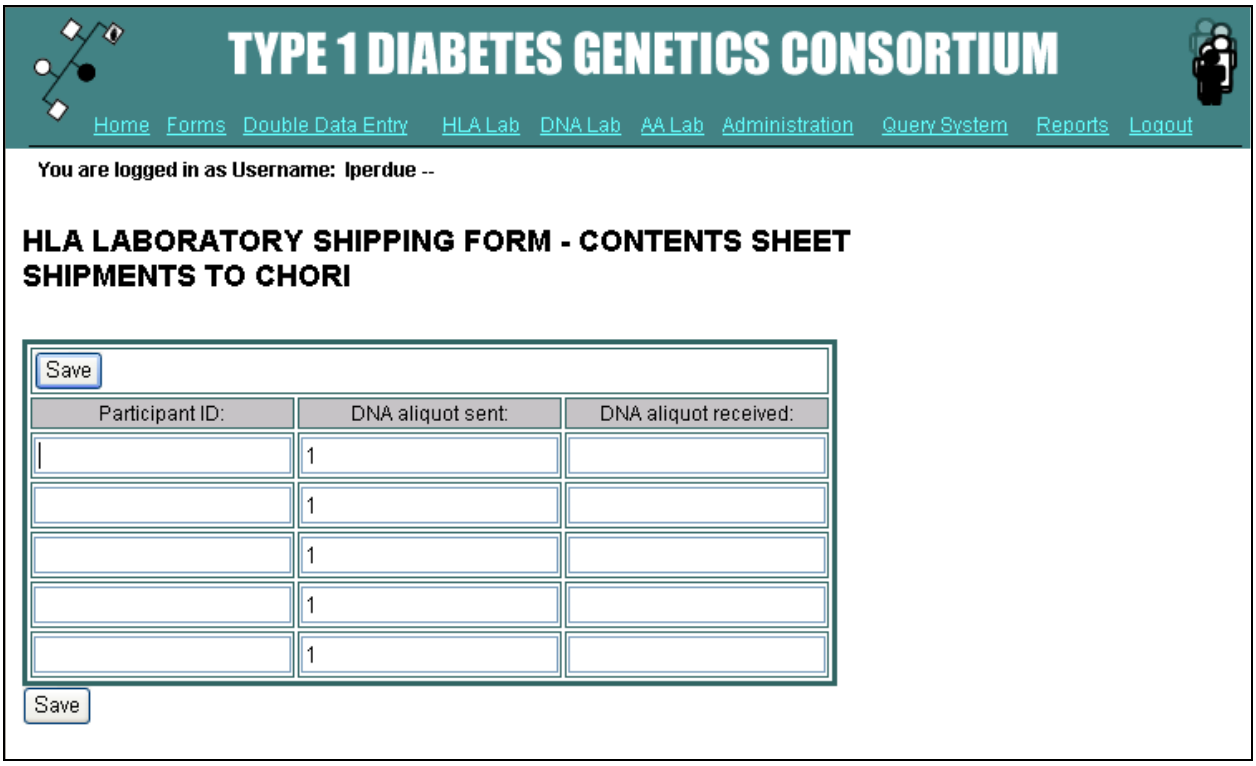


Figure 8. ***HLA Genotyping Laboratory Shipping Form – Contents Sheet.***

7. Make sure that the cursor is in the first box under the "Participant ID." Scan the participant ID label on the first tube. The system will automatically move the cursor to the next participant ID field. Once all participant IDs have been scanned in, click the "Save" button. The form will not save if any participant IDs are left blank, duplicated, or do not contain 7 digits.

Receiving HLA Genotyping Laboratory ONLY (CHORI)

8. If a blank *Face Sheet* is displayed, the receiving HLA Genotyping Laboratory should enter the **entire** form and contact the Coordinating Center who will in turn contact the shipping HLA Genotyping Laboratory to ensure that this does not occur in future shipments.

9. If a shipment has been entered, the HLA Genotyping Laboratory Shipping Form Selection Page will appear. From this page, the shipping HLA Genotyping Laboratory user has three options:

a. “Start over with a new shipment” which returns the HLA Genotyping Laboratory user to the screen with the box titled “Enter or Scan a HLA Shipping ID”.

b. “Print HLA Shipping Contents Sheet” which displays what is currently saved in the database on the *Contents Sheet* and allows the HLA Genotyping Laboratory user to print this information.

c. “View a HLA Shipping Form Page” which displays previously entered shipping forms and what is currently saved in the database for the *Face Sheet* or *Contents Sheet*.

10. The HLA Genotyping Laboratory user will select “View a HLA Shipping Form Page” in order to data enter the part of the HLA Genotyping Laboratory Shipping Form completed after receipt of samples.

11. *HLA Genotyping Laboratory Shipping Form – Face Sheet*

a. The shipping HLA Genotyping Laboratory will enter the data recorded on the *HLA Genotyping Laboratory Shipping Forms* at the time of receipt of the shipment. When the HLA Genotyping Laboratory staff scans the HLA shipping ID and selects Face Sheet, the *Face Sheet* displayed will be populated with the data entered at the shipping HLA Genotyping Laboratory.

b. Enter the right side of the lower portion of the form (titled “Completed by CHORI”) and press the “Save” button at the bottom of the page.

12. *HLA Genotyping Laboratory Shipping – Form Face Sheet* Warnings and Errors

a. Warnings (Orange Dots):

(i) If data entered are out of an “expected” range, the form is redisplayed with an orange dot at the top describing the potential mistake.

(ii) Confirm that the data on the form matches that entered on the web page.

(iii) If the data match, scroll to the bottom and press the “Save with Warnings” button. If the data do not match, correct the erroneous data and press the “Save” button.

(iv) The receiving HLA Genotyping Laboratory staff (CHORI) **cannot and should not** correct data on shipping forms that were entered by the shipping HLA Genotyping Laboratory staff without consulting the shipping HLA Genotyping Laboratory.

b. Errors (Red Dots):

(i) If data entered are out of an “expected” range or the data field is blank and the field is **required**, the form is redisplayed with a red mark at the top describing the potential error.

(ii) Confirm that the data on the form matches that entered on the web page.

(iii) If the data match and are valid, the Coordinating Center should be contacted. If the data do not match, correct the discrepant data and press the “Save” button.

13. *HLA Genotyping Laboratory Shipping Form – Contents Sheet*

a. After a successful save of the *Face Sheet*, the HLA Genotyping Laboratory is redirected back to the Shipping Form Selection Page.

b. The HLA Genotyping Laboratory user selects “View a HLA Shipping Form Page” *Contents Sheet* and the *Contents Sheet* is displayed. This should be populated with the data entered at the shipping HLA Genotyping Laboratory at the time of shipment. If the *Contents Sheet* is blank, the HLA Genotyping Laboratory user should enter the **entire** form and contact the Coordinating Center who will in turn contact the shipping HLA Genotyping Laboratory to ensure that this does not occur in future shipments.

c. Enter the data recorded in the column labeled “DNA aliquots received.” Press the “Save” button at the top or bottom of the page.

d. The HLA Genotyping Laboratory user will be unable to save the *Contents Sheet* if any field is left blank. (*i.e.,* if an aliquot is not received, the HLA Genotyping Laboratory user must enter "0" in the field rather than leaving the field blank.)

F. Ethnicity Report

1. The Ethnicity Report can be generated for any shipment in the database. This function accesses and compiles the ethnic codes from the participant's T1DGC exam forms in the database. The codes are converted to the corresponding ethnicity and output as text.

2. If data entry of the T1DGC exam forms has not been completed before the DNA shipping form is entered, the HLA Genotyping Laboratory user will see the message "The participant's forms in this shipment have not been data entered!" on the Ethnicity Report beside the participant ID. Otherwise, the ethnicity code(s) will be displayed for each participant.

3. To access the Ethnicity Report, click on the "Ethnicity Report" link on the HLA Laboratory System page. A list of DNA shipping IDs will be displayed; the HLA Genotyping Laboratory user clicks on the desired shipment (Figure 9).

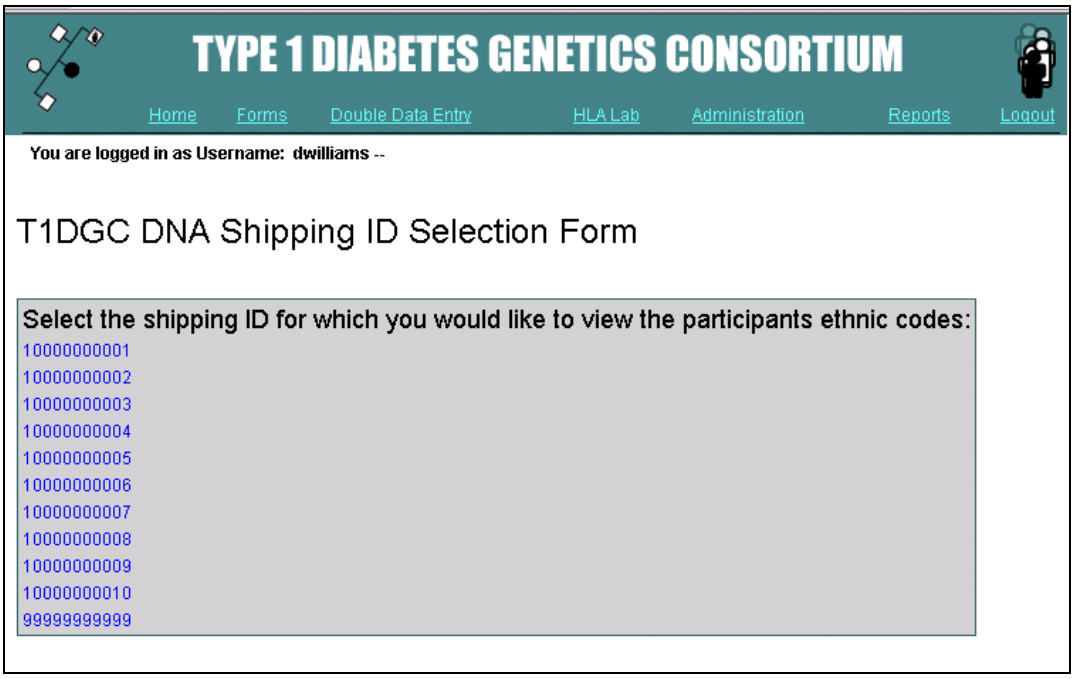
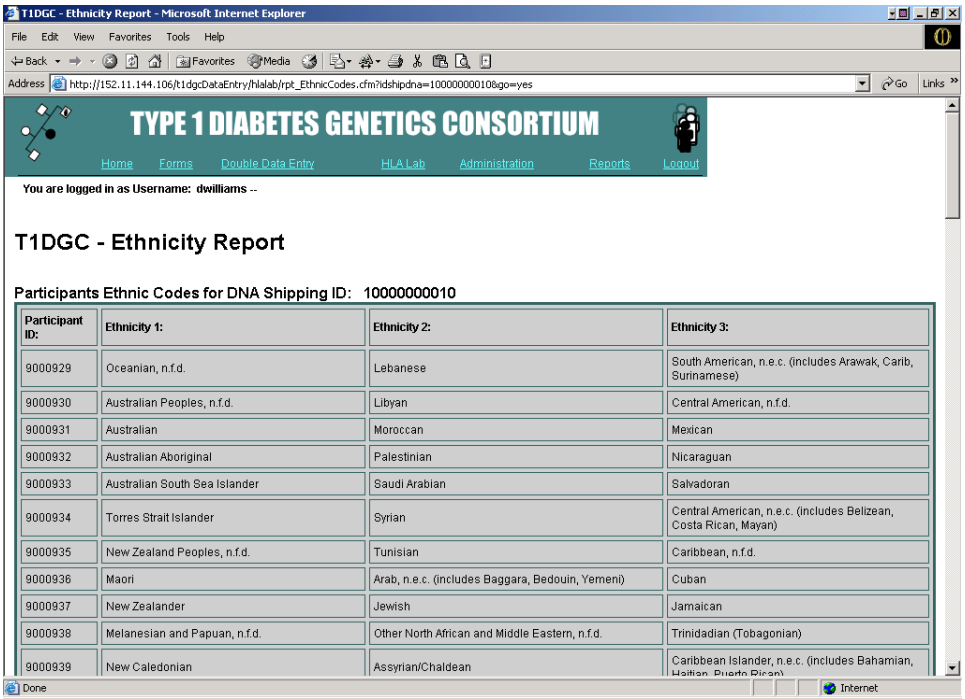


Figure 9. Selection of DNA shipping ID to access participant's ethnicity information.

4. The Ethnicity Report for the specified DNA shipping ID will be displayed (Figure 10).



Participant ID:	Ethnicity 1:	Ethnicity 2:	Ethnicity 3:
9000929	Oceanian, n.f.d.	Lebanese	South American, n.e.c. (includes Arawak, Carib, Surinamese)
9000930	Australian Peoples, n.f.d.	Libyan	Central American, n.f.d.
9000931	Australian	Moroccan	Mexican
9000932	Australian Aboriginal	Palestinian	Nicaraguan
9000933	Australian South Sea Islander	Saudi Arabian	Salvadoran
9000934	Torres Strait Islander	Syrian	Central American, n.e.c. (includes Belizean, Costa Rican, Mayan)
9000935	New Zealand Peoples, n.f.d.	Tunisian	Caribbean, n.f.d.
9000936	Maori	Arab, n.e.c. (includes Baggara, Bedouin, Yemeni)	Cuban
9000937	New Zealander	Jewish	Jamaican
9000938	Melanesian and Papuan, n.f.d.	Other North African and Middle Eastern, n.f.d.	Trinidadian (Tobagonian)
9000939	New Caledonian	Assyrian/Chaldean	Caribbean Islander, n.e.c. (includes Bahamian, Haitian, Puerto Rican)

Figure 10. Ethnicity report.

5. The HLA Genotyping Laboratory user can print this report by selecting “Print” from the web browser menu.

G. Master Plate Grid

1. When the HLA Genotyping Laboratory user accesses the “Master Plate Grid” link, the DNA Shipping ID Selection Form is displayed (Figure 11).

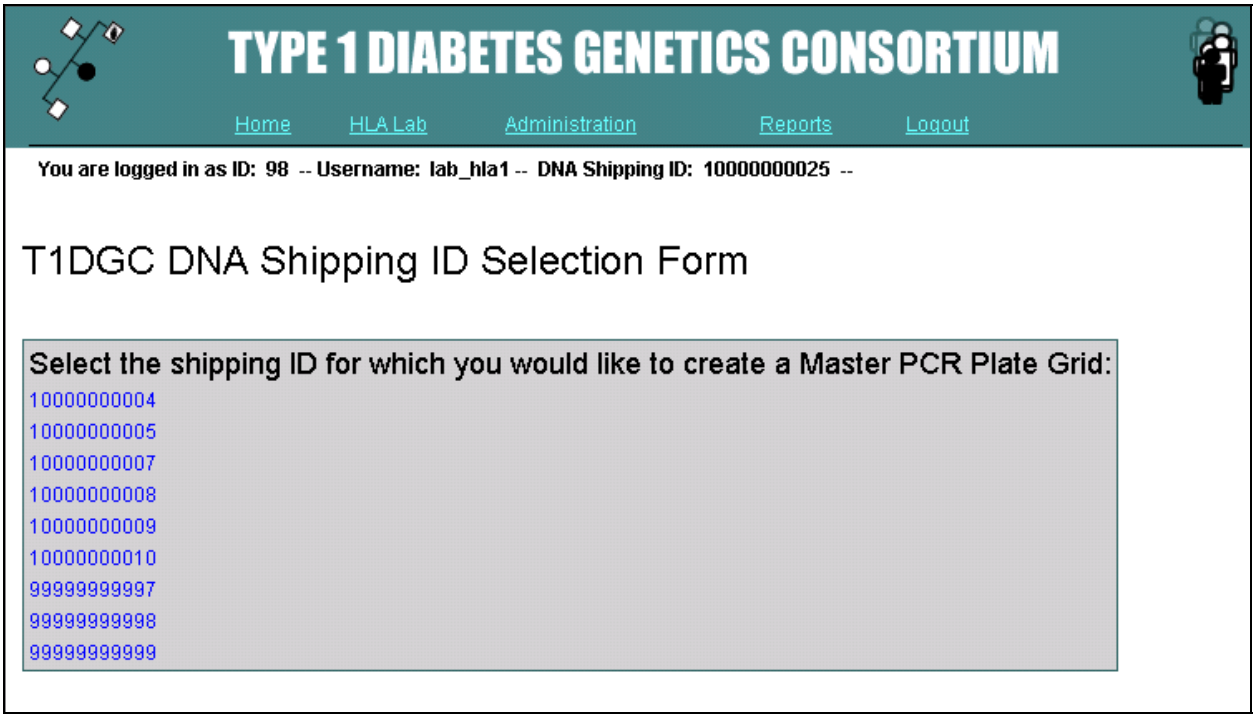
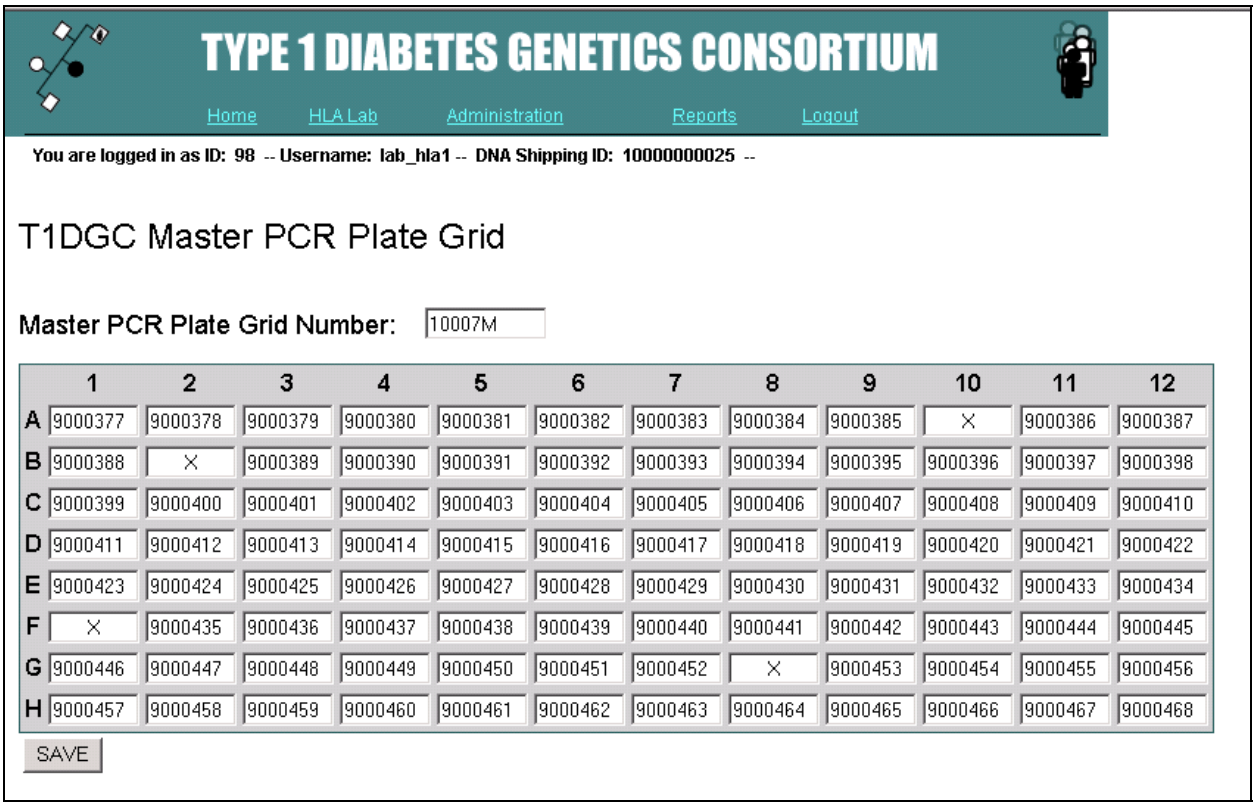


Figure 11. DNA shipping ID selection form.

2. The HLA Genotyping Laboratory user must choose the DNA shipping ID for which to create a Master Plate Grid.

3. Once a shipping ID has been selected, the Master Plate Grid is displayed and populated with the data from that shipment (Figure 12).
   a. Data are sorted numerically and can be edited at this time. However, there should be very few reasons to use this edit function.
   b. **Once the plate is saved, the HLA Genotyping Laboratory user cannot modify the plate.**

c. If modifications are necessary, the HLA Genotyping Laboratory user must cancel the Master Plate Grid and start over with a new grid. (See Section IV.P.)



	1	2	3	4	5	6	7	8	9	10	11	12
A	9000377	9000378	9000379	9000380	9000381	9000382	9000383	9000384	9000385	X	9000386	9000387
B	9000388	X	9000389	9000390	9000391	9000392	9000393	9000394	9000395	9000396	9000397	9000398
C	9000399	9000400	9000401	9000402	9000403	9000404	9000405	9000406	9000407	9000408	9000409	9000410
D	9000411	9000412	9000413	9000414	9000415	9000416	9000417	9000418	9000419	9000420	9000421	9000422
E	9000423	9000424	9000425	9000426	9000427	9000428	9000429	9000430	9000431	9000432	9000433	9000434
F	X	9000435	9000436	9000437	9000438	9000439	9000440	9000441	9000442	9000443	9000444	9000445
G	9000446	9000447	9000448	9000449	9000450	9000451	9000452	X	9000453	9000454	9000455	9000456
H	9000457	9000458	9000459	9000460	9000461	9000462	9000463	9000464	9000465	9000466	9000467	9000468

Figure 12. Master plate grid form.

4. When the Master Plate Grid is set, press the “Save” button at the bottom of the page.

5. Once the Master Plate Grid has been saved, the HLA Genotyping Laboratory user is directed to a screen that queries “Please select what you would like to do”, with three options (Figure 13):
   a. **Set up a new Master Plate Grid:** displays the DNA shipping ID selection form (Figure 11);

b. **Print Out Current Master Plate Grid:** displays the Master Plate Grid report; this report allows the HLA Genotyping Laboratory user to print the Master Plate Grid (see Section IV.H.); or

c. **Return to the HLA Laboratory Page:** displays the HLA Laboratory System Menu (Figure 2).

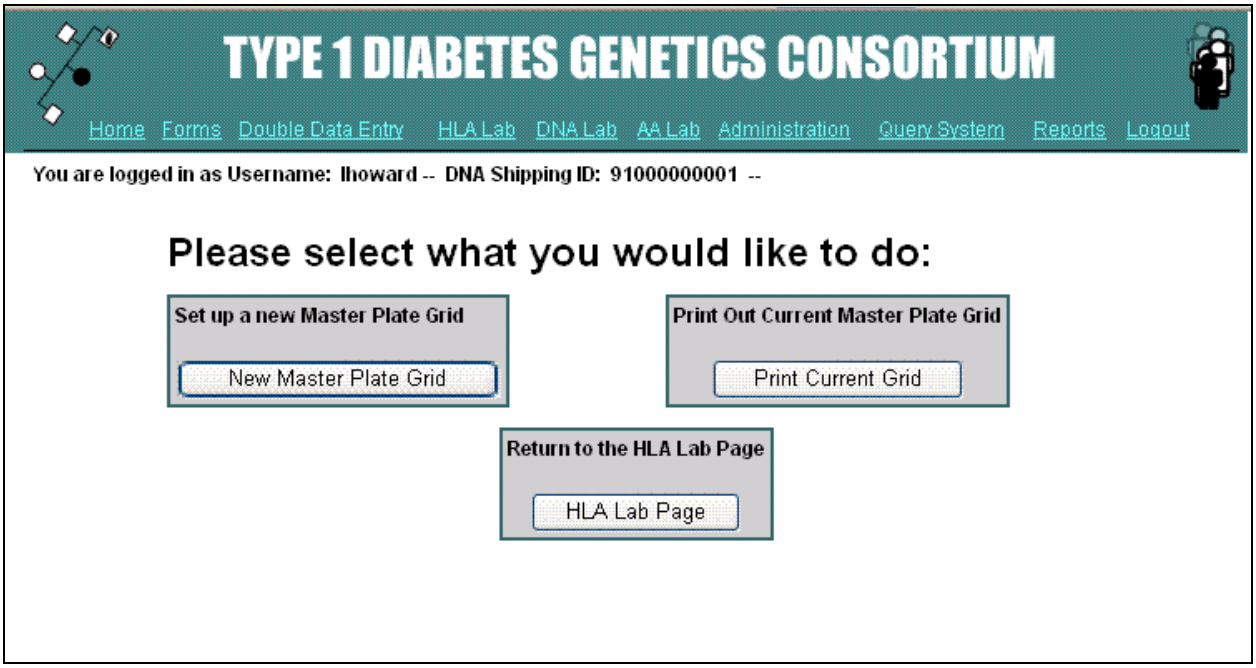


Figure 13. Master plate grid selection page.

H. Master Plate Grid Report

1. When the HLA Genotyping Laboratory user accesses the Master Plate Grid Report, a list of available Master Plate Grids is displayed (Figure 14).

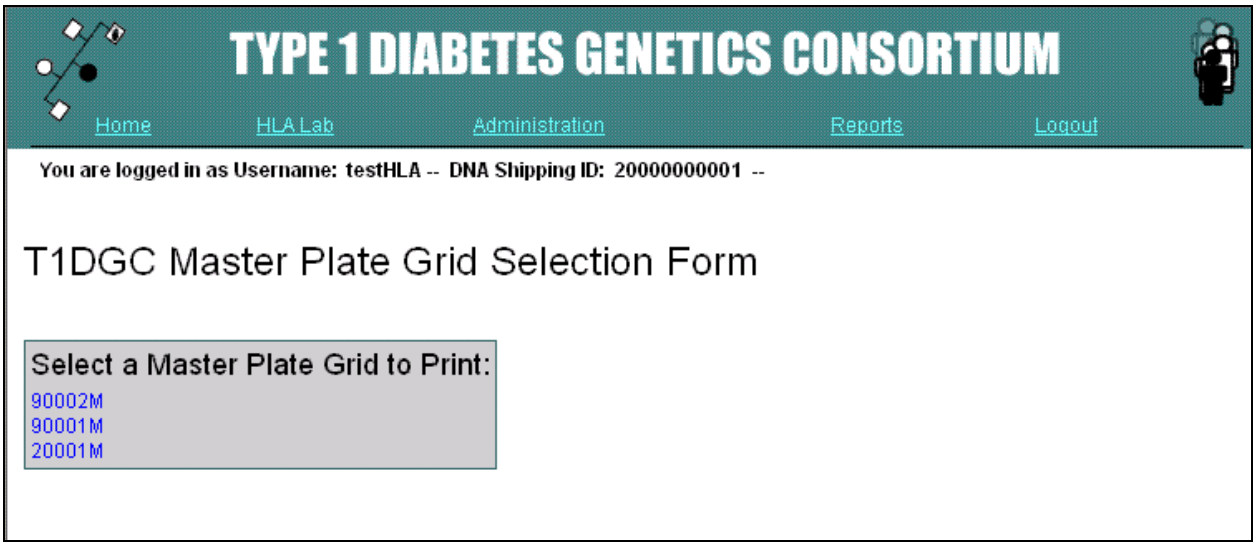


Figure 14. List of master plate grids available to print.

2. Click on the Master Plate Grid to be printed. The print dialogue box is displayed over the Master Plate Grid Report (Figure 15).
   a. If the printed page does not fit on one sheet, try printing in Landscape.
   b. Note that if the orientation is changed to landscape, all subsequent pages printed from the browser will print in landscape mode. To change the print orientation back, click “File” and select “Page Setup.”

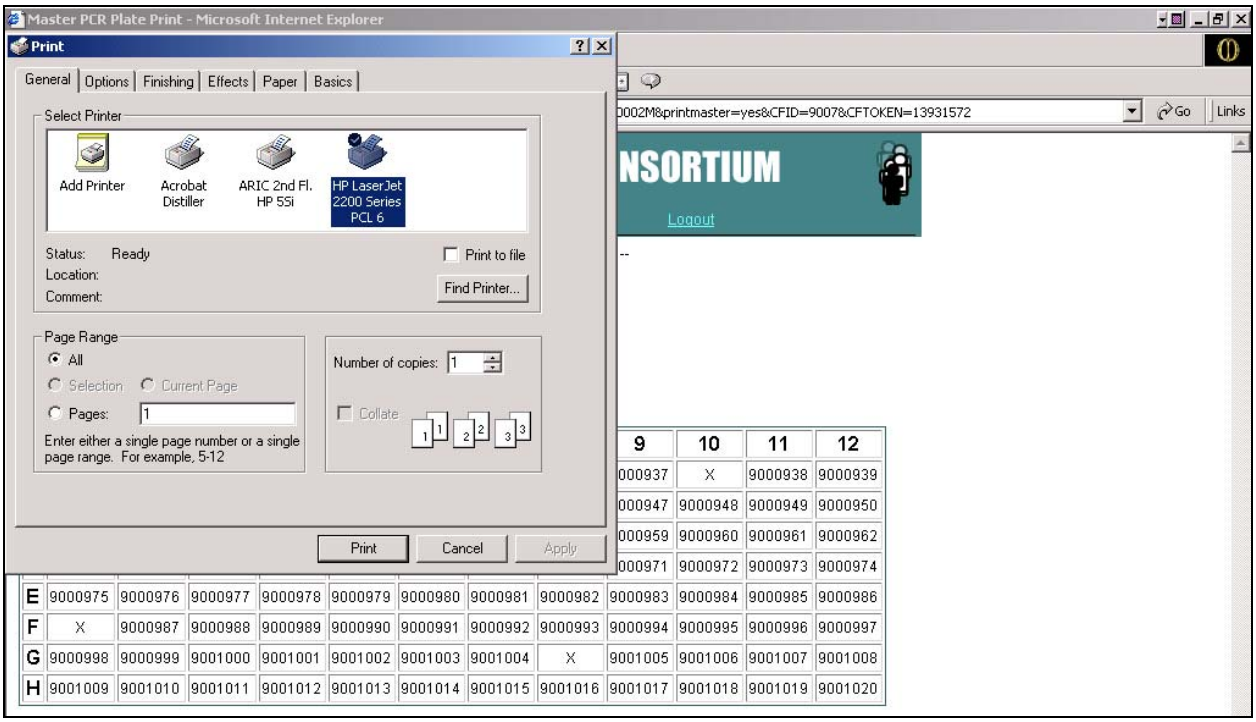


Figure 15. Print master plate grid form.

I. Sub-typing Plate Grid

1. When the HLA Genotyping Laboratory user accesses the Sub-typing Plate Grid, the Master Plate Grid Selection Form is displayed (Figure 16).

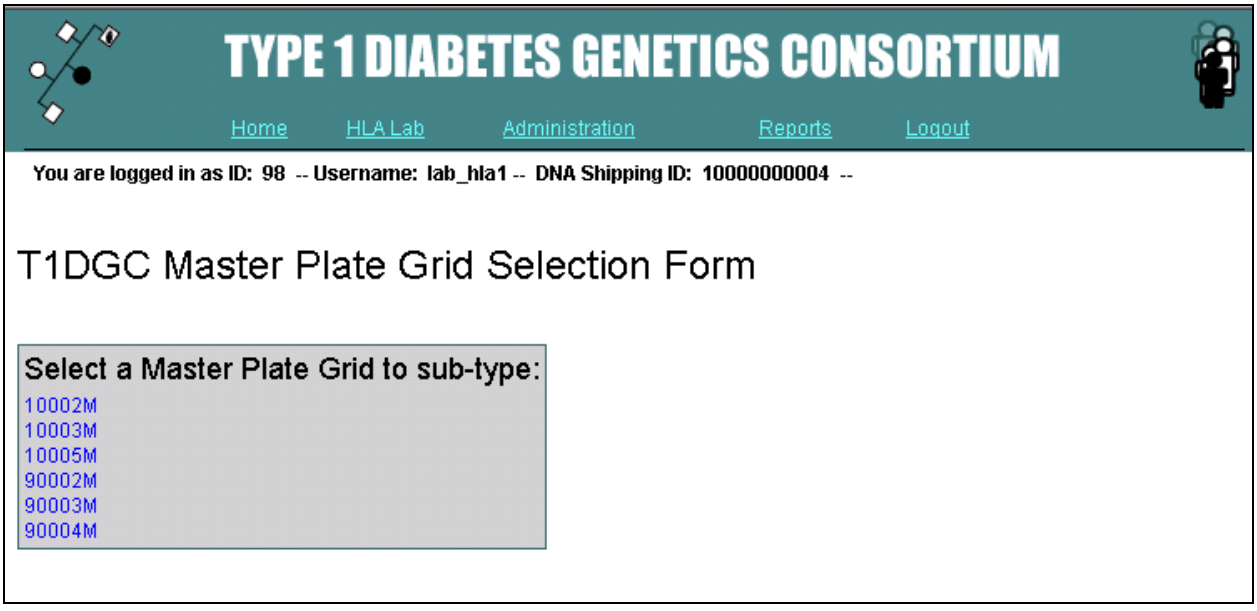


Figure 16. Master plate grid selection form.

2. The HLA Genotyping Laboratory user must choose the Master Plate Grid that will be used to create a Sub-typing Plate Grid.

3. Once a Master Plate Grid has been selected, the Sub-typing Plate Grid Form is displayed and the top portion of the form is populated with the data from that Master Plate Grid (Figure 17).

4. Set the placement criteria.
   a. The placement address will default to the next well in chronological order; however, the HLA Genotyping Laboratory user can change the placement address to another well if desired.
   b. The "Fill Mode" will default to place the IDs horizontally. The HLA Genotyping Laboratory user can choose to place the IDs horizontally or vertically.
   c. Select the "Assay" to be associated with the selected IDs (*e.g.*, WLF, WPR, YSTS, VH, GYK or YSTG).

5. Select all of the IDs to sub-type for a particular assay. **ALWAYS select a "Control" at the end of each assay on a Sub-typing Plate Grid.**

6. Press "Place" to place the IDs into the Sub-typing Plate Grid.

7. When the grid is complete, press the "Save Sub-plate" button at the bottom of the page (Figure 18). If the HLA Genotyping Laboratory user needs to start over, press the "Start Over" button at the bottom of the page to clear the Sub-typing Plate Grid.

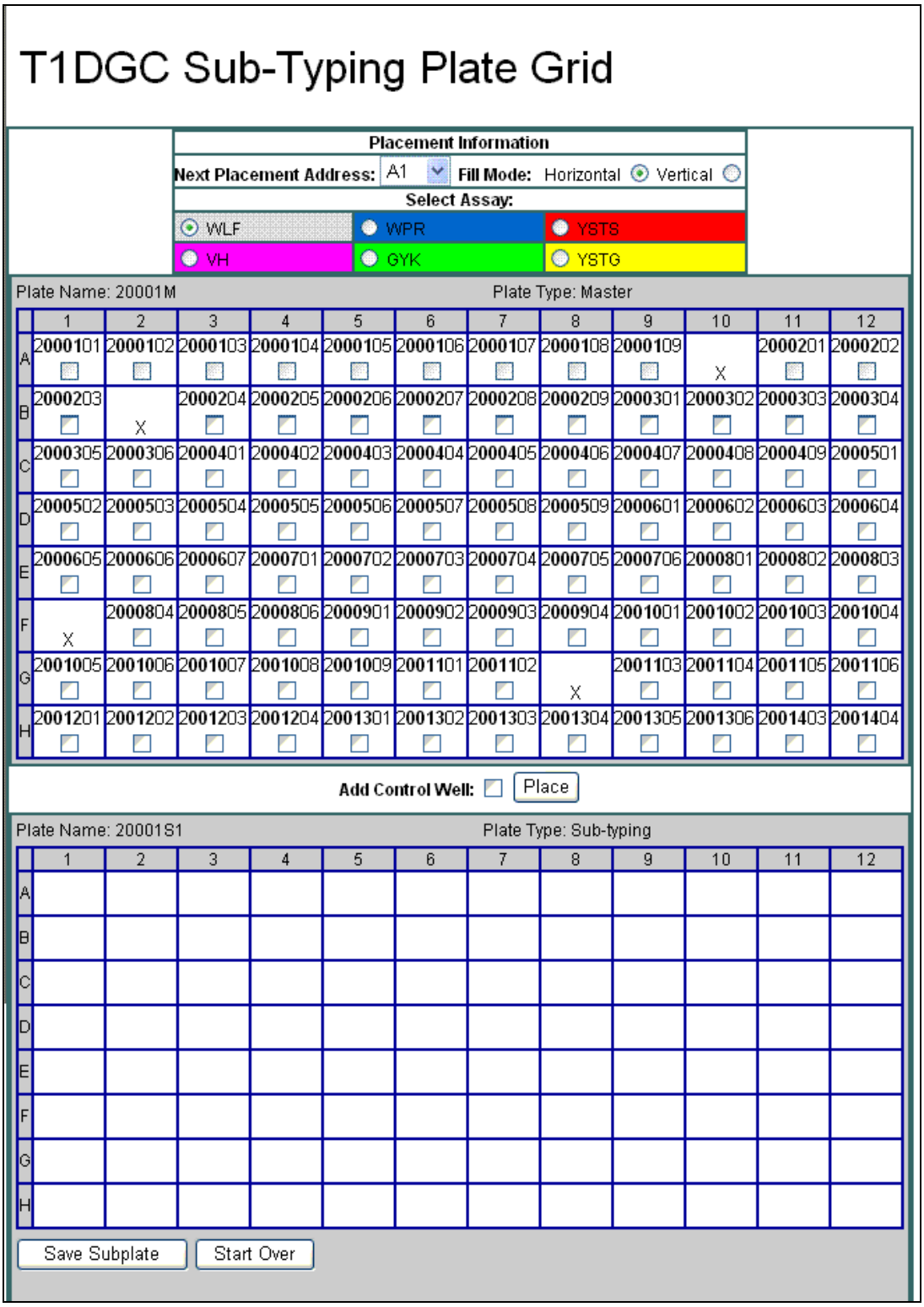


Figure 17. Sub-typing plate grid (before sub-typing plate grid filled).

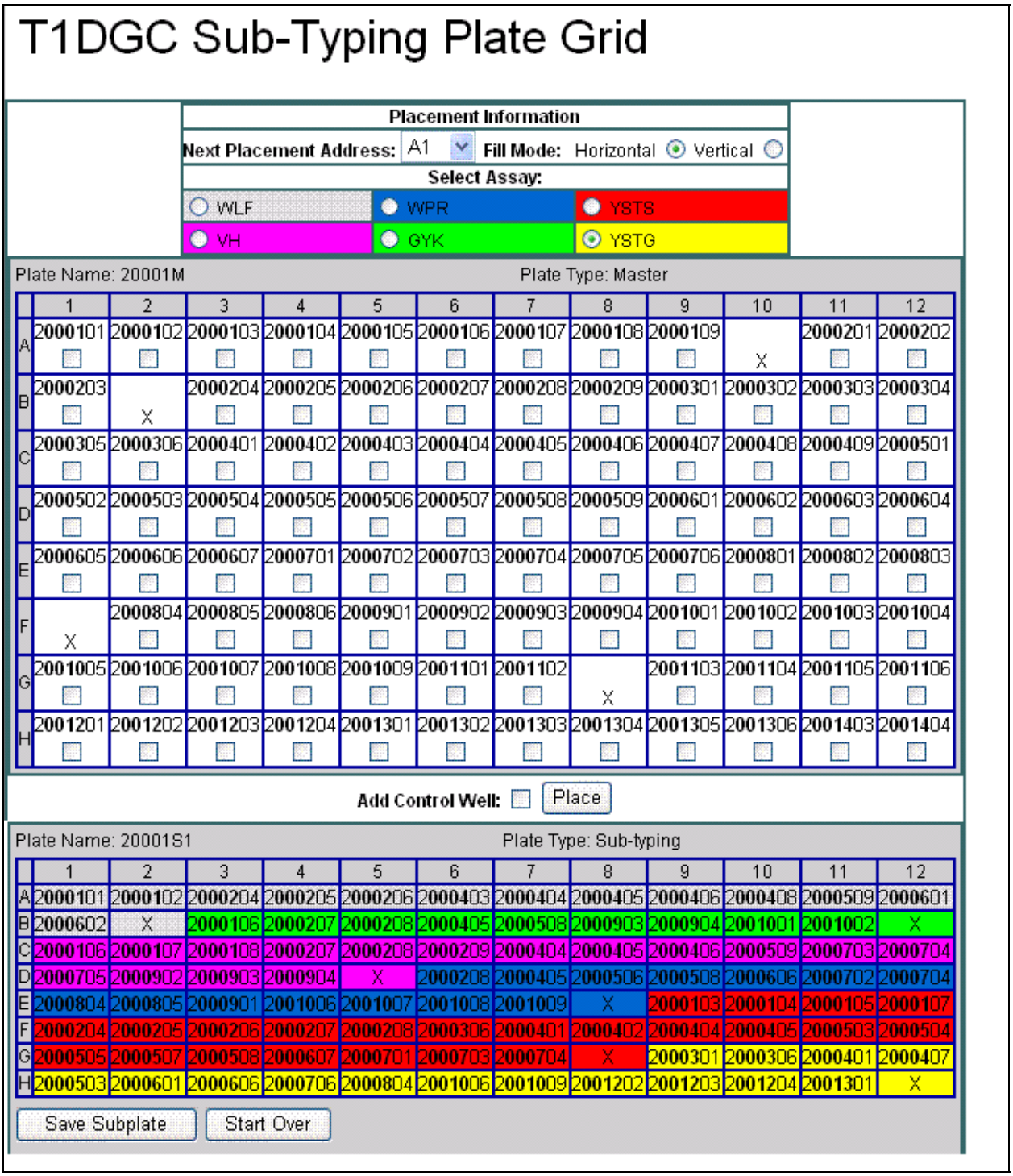


Figure 18. Sub-typing plate grid (after sub-typing plate grid filled).

8. The Master Plate Grid Selection Form is displayed with a message stating the Sub-typing Plate Grid has been saved (Figure 19).

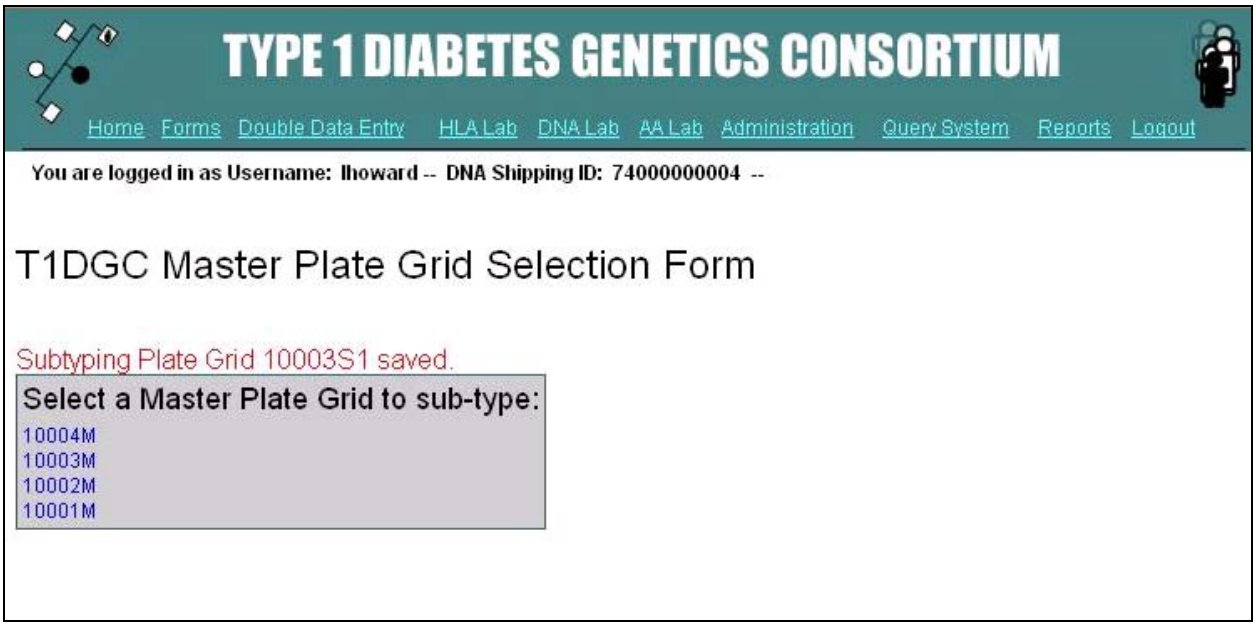


Figure 19. Master plate grid selection form (after Sub-typing plate grid has been saved).

J. Sub-typing Plate Grid Report

1. When the HLA Genotyping Laboratory user accesses the Sub-typing Plate Grid Report, a list of available Sub-typing Plate Grids is displayed (Figure 20).

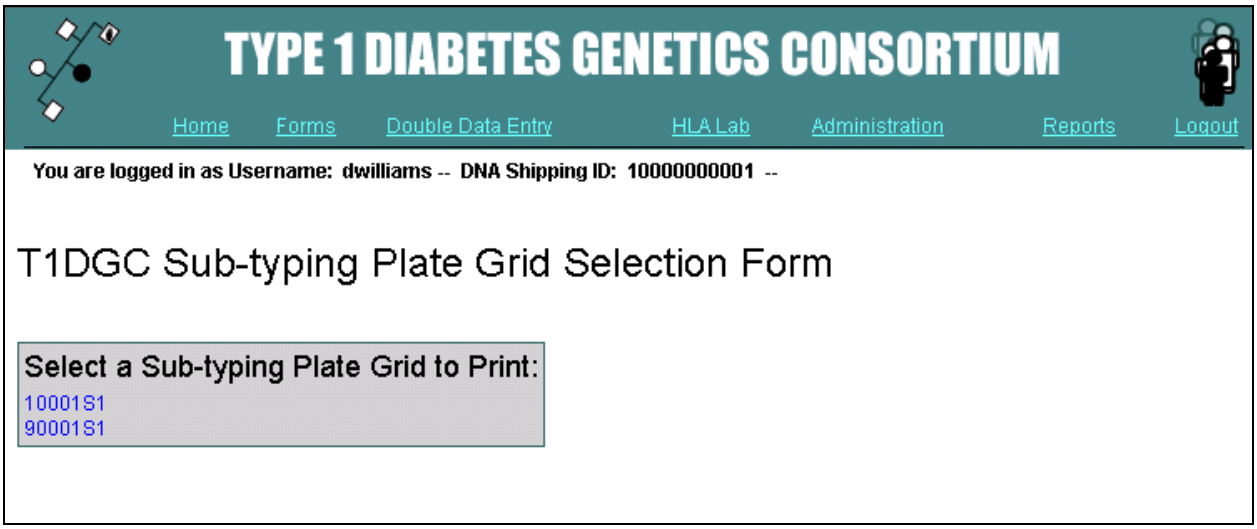


Figure 20. List of sub-typing plate grids available to print.

2. Click on the Sub-typing Plate Grid to be printed. The print dialogue box is displayed over the Sub-typing Plate Grid Report (Figure 21).
   a. If the printed page does not fit on one sheet, try printing in Landscape.
   b. Note that if the orientation is changed to landscape, all subsequent pages printed from the browser will print in landscape mode. To change the print orientation back, click “File” and select “Page Setup.”

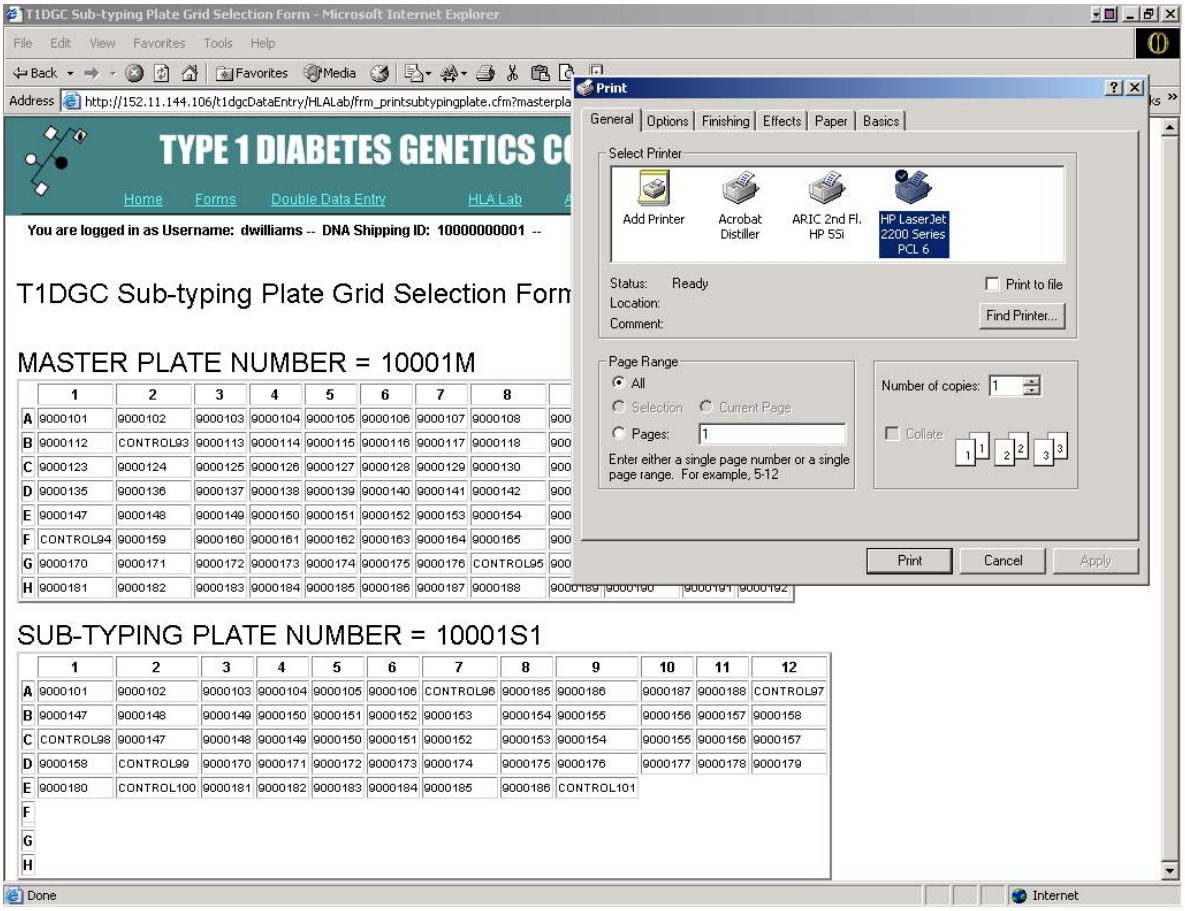


Figure 21. Sub-typing plate grid report.

K. Sub-typing Plate Grid Details Report

1. When the HLA Genotyping Laboratory user accesses the Sub-typing Plate Grid Details Report, a list of available Master Plate Grids is displayed (Figure 22).

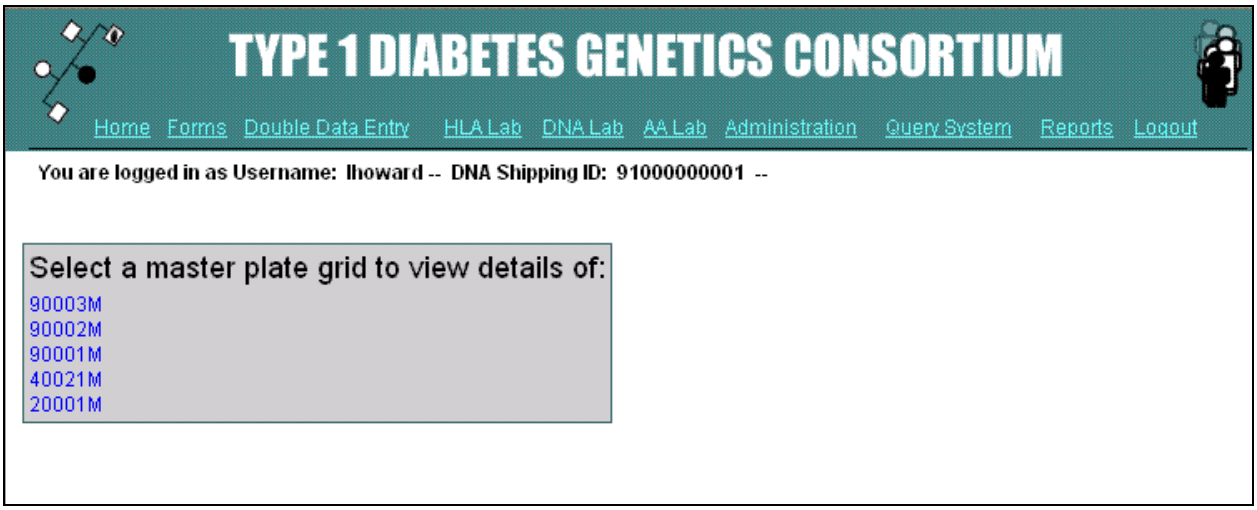


Figure 22. List of master plate grids available to view.

2. To obtain the detailed list of assays and IDs for a Sub-typing Plate Grid, the HLA Genotyping Laboratory user must choose the Master Plate Grid ID corresponding to that Sub-typing Plate Grid.

3. Once a Master Plate Grid has been selected, the Sub-typing Plate Grid Details Report is displayed (Figure 23).

4. Select “Print” from the web browser menu to print this report.

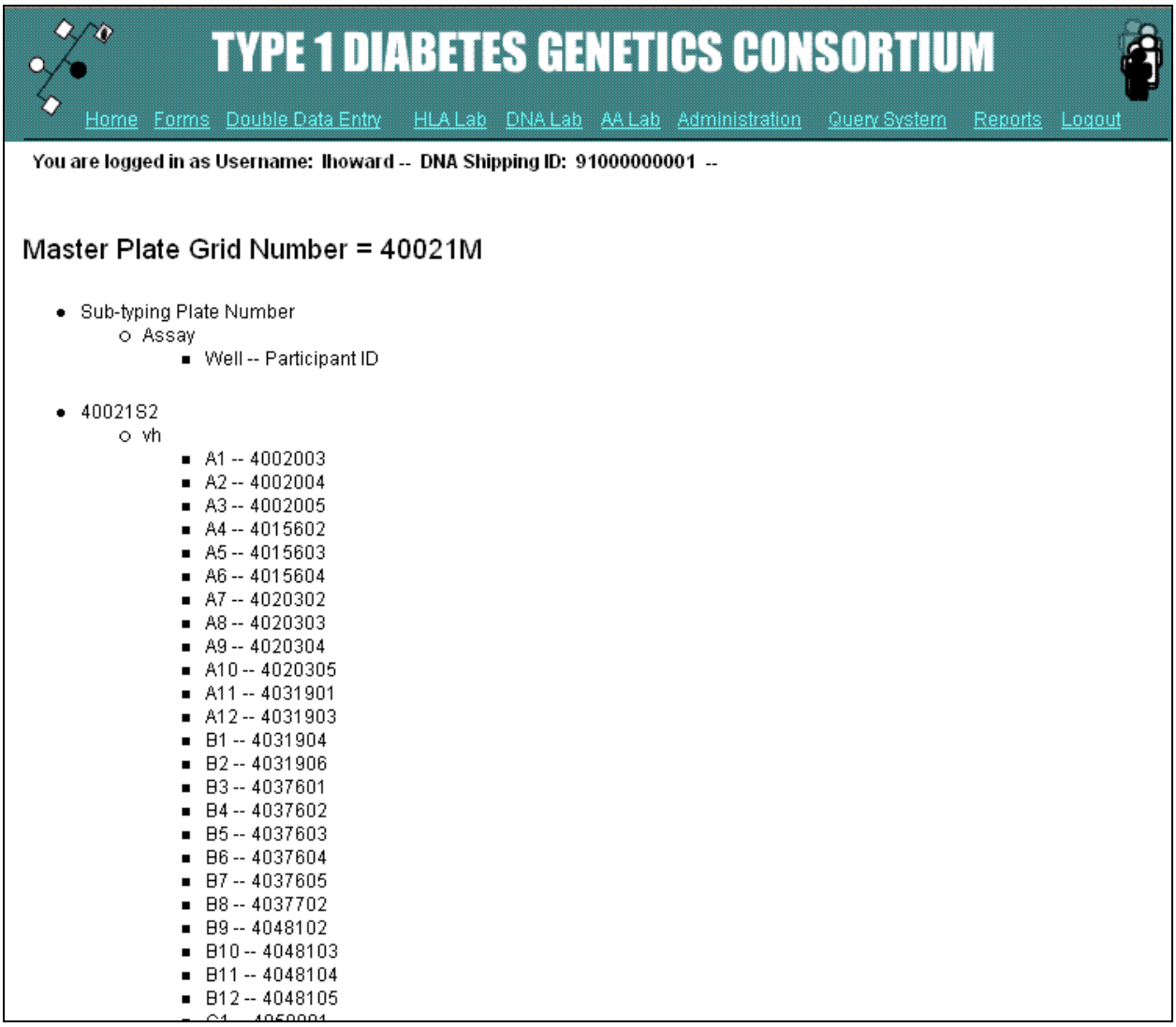


Figure 23. Sub-typing plate grid details report.

L. Sub-typing to Master Grid Report

1. When the HLA Genotyping Laboratory user accesses the Sub-typing to Master Grid Report, a list of available Sub-typing Plate Grids is displayed (Figure 24).

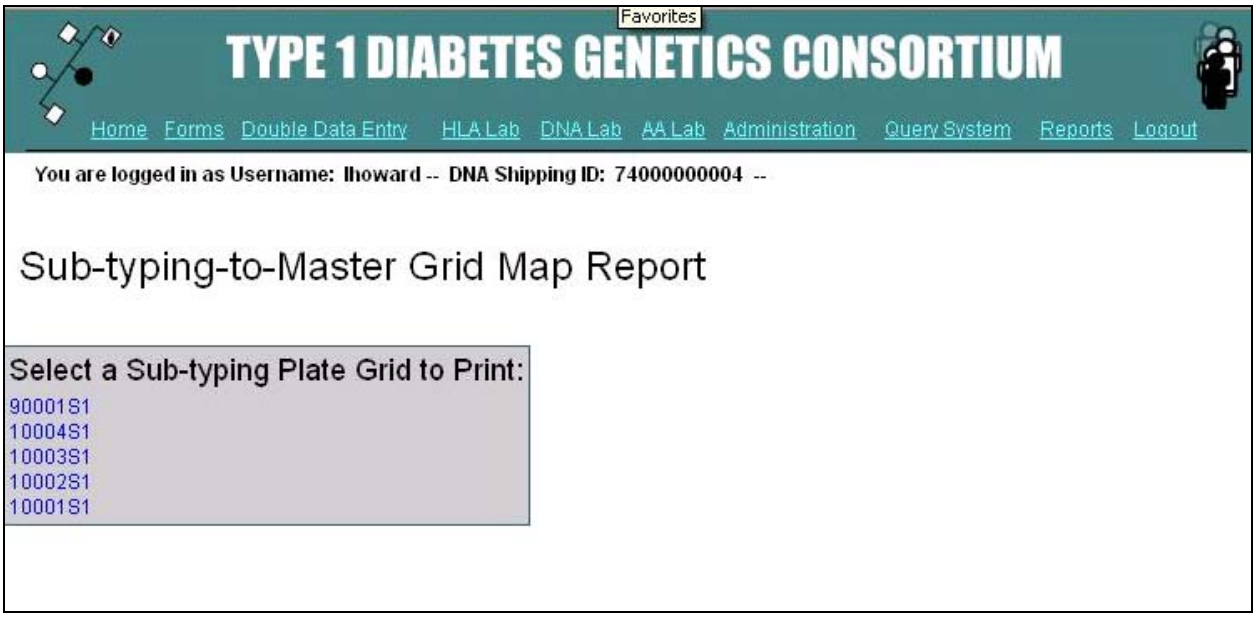


Figure 24. List of sub-typing plate grids available to print.

2. Click on the Sub-typing Plate Grid to be printed. The print dialogue box is displayed over the Sub-typing to Master Grid Report (Figure 25).
   a. If the printed page does not fit on one sheet, try printing in Landscape.
   b. Note that if the orientation is changed to landscape, all subsequent pages printed from the browser will print in landscape mode. To change the print orientation back, click “File” and select “Page Setup.”

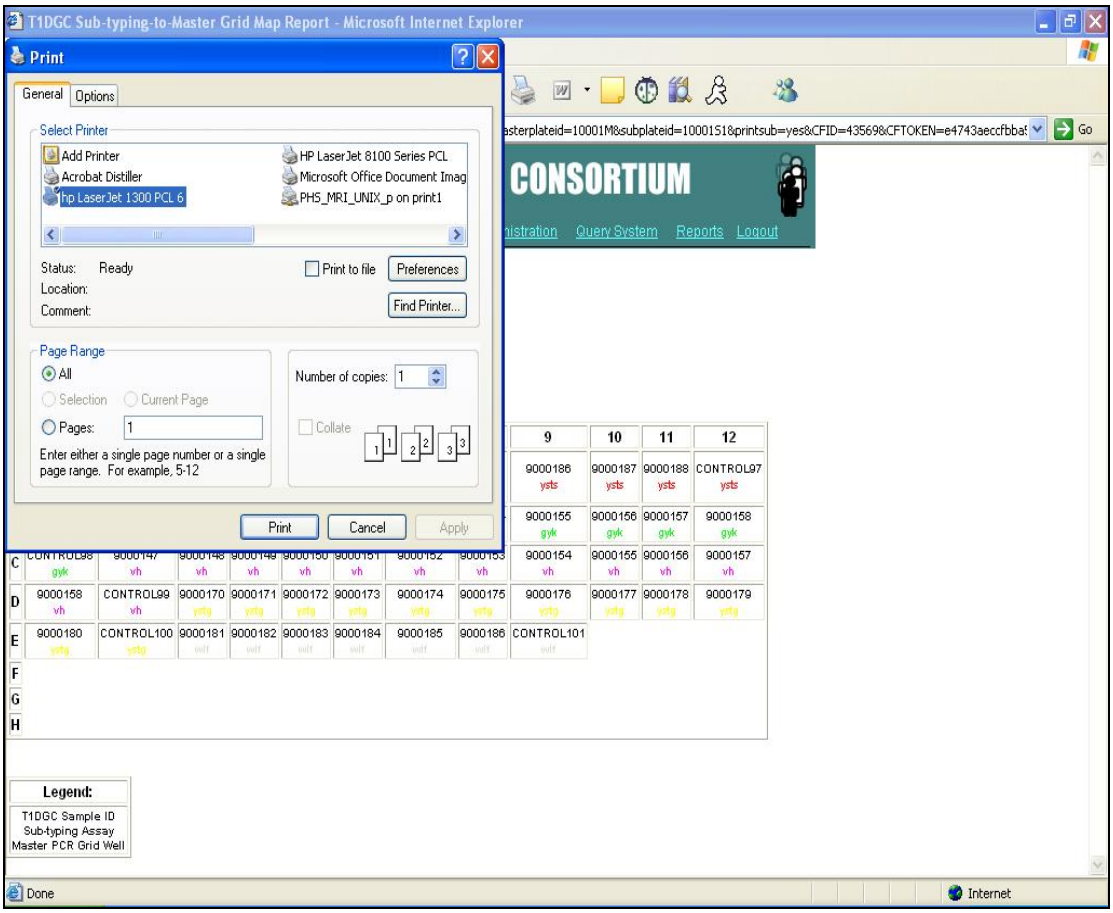


Figure 25. Sub-typing to master grid report.

M. Redo Plate Grid

1. When the HLA Genotyping Laboratory user accesses the Redo Plate Grid, the HLA Master Plate Grid Selection Form is displayed. The HLA Genotyping Laboratory user must choose the Master Plate Grid that will be used to create a Redo Plate Grid. By selecting the Master Plate Grid, the HLA Genotyping Laboratory user will be able to select IDs on the chosen Master Plate Grid (Figure 26).

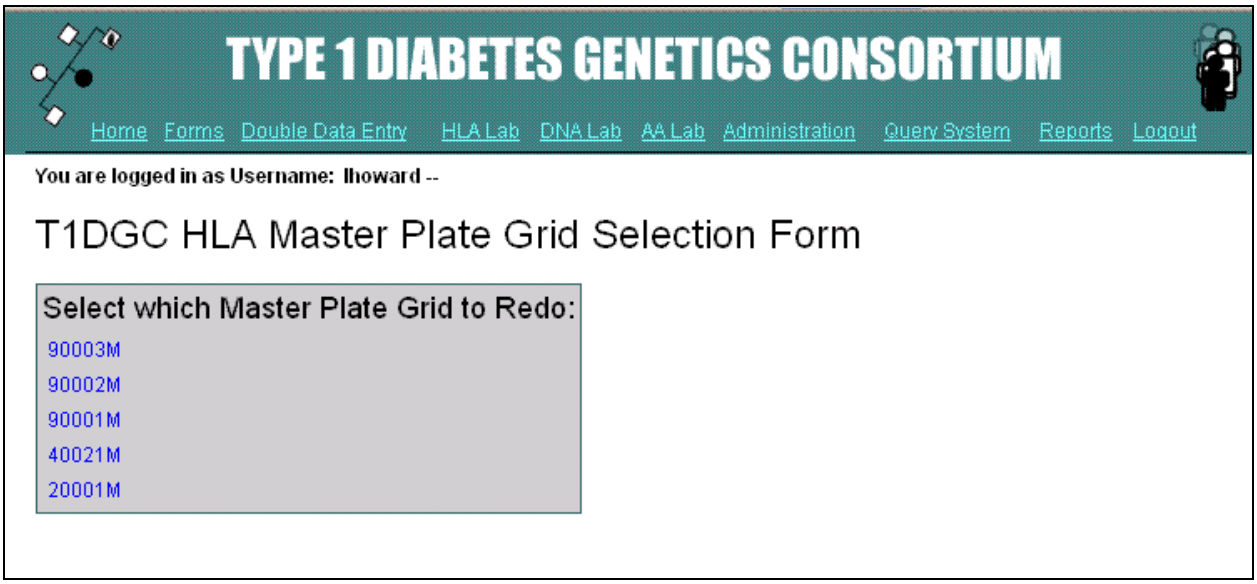


Figure 26. HLA master plate grid selection form.

2. The system will display the selected Master Plate Grid and the blank Redo Plate Grid below (Figure 27).

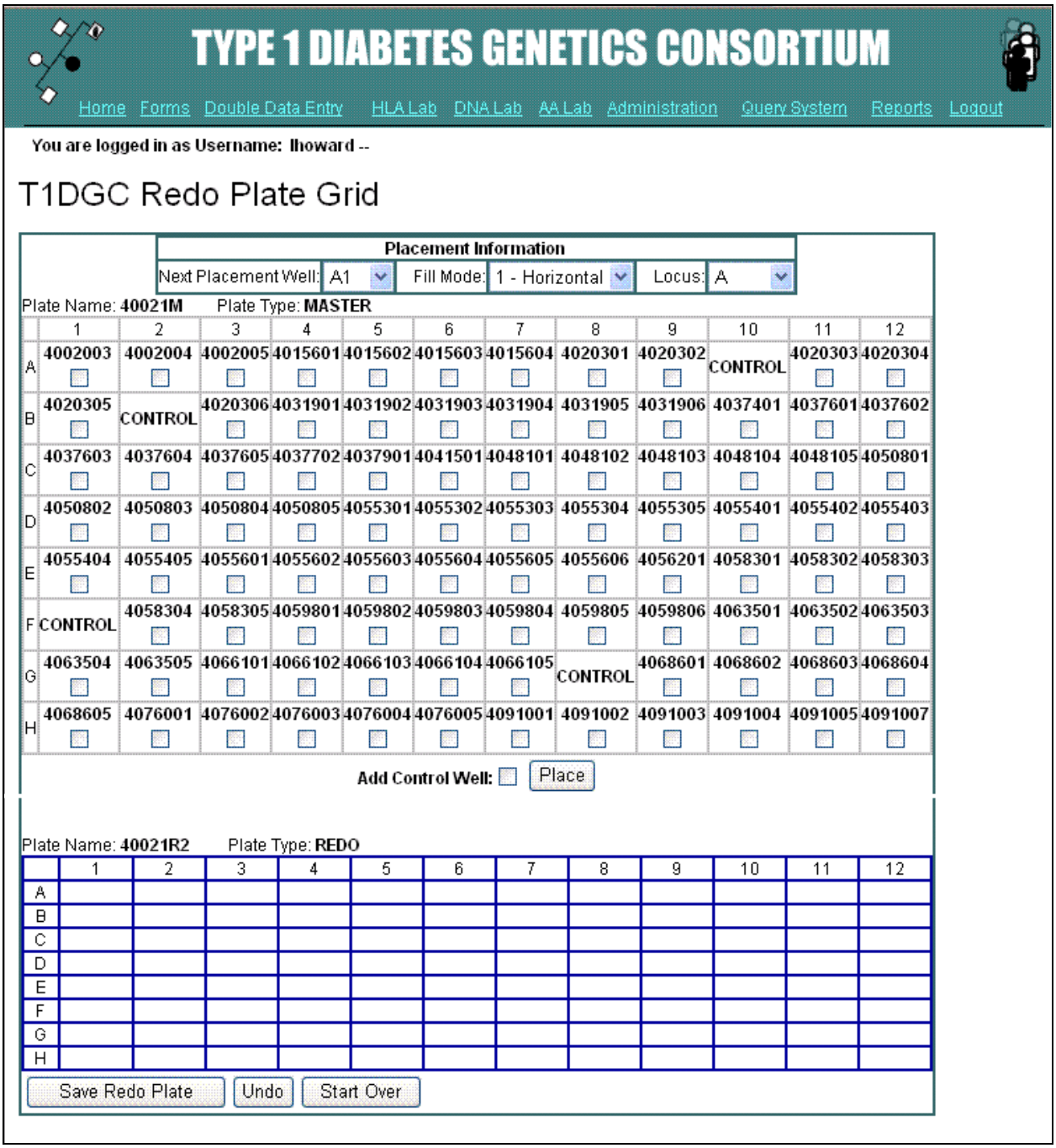


Figure 27. Redo plate grid (before redo plate grid filled).

3. Set the placement criteria.

   a. The placement address will default to the next well in chronological order; however, the HLA Genotyping Laboratory user can change the placement address to another well if desired.

b. The “Fill Mode” will default to place the IDs horizontally. The HLA Genotyping Laboratory user can choose to place the IDs horizontally or vertically.

c. Set the “Locus” to be associated with the selected IDs.

4. Select all of the IDs to redo for a particular locus. **ALWAYS check the “Add Control Well” box at the end of each assay on a Redo Plate Grid**.

5. Press “Place” to place the IDs into the Redo Plate Grid.

6. When the grid is complete, press the “Save Redo Plate” button at the bottom of the page (Figure 28).

7. The HLA Master Plate Grid Selection Form is displayed with a message stating the Redo Plate Grid has been saved (Figure 29).

8. If the HLA Genotyping Laboratory user selects the information after placing the IDs, the HLA Genotyping Laboratory user can click “Undo” and clear the **last** stack of IDs that were added to the Redo Plate Grid. (NOTE: Only the last group of IDs placed can be removed. If group 1 is placed and then group 2 is placed, group 2 can be undone, but group 1 cannot be undone.)

9. If the HLA Genotyping Laboratory user needs to start over, press the “Start Over” button at the bottom of the page to clear the Redo Plate Grid.

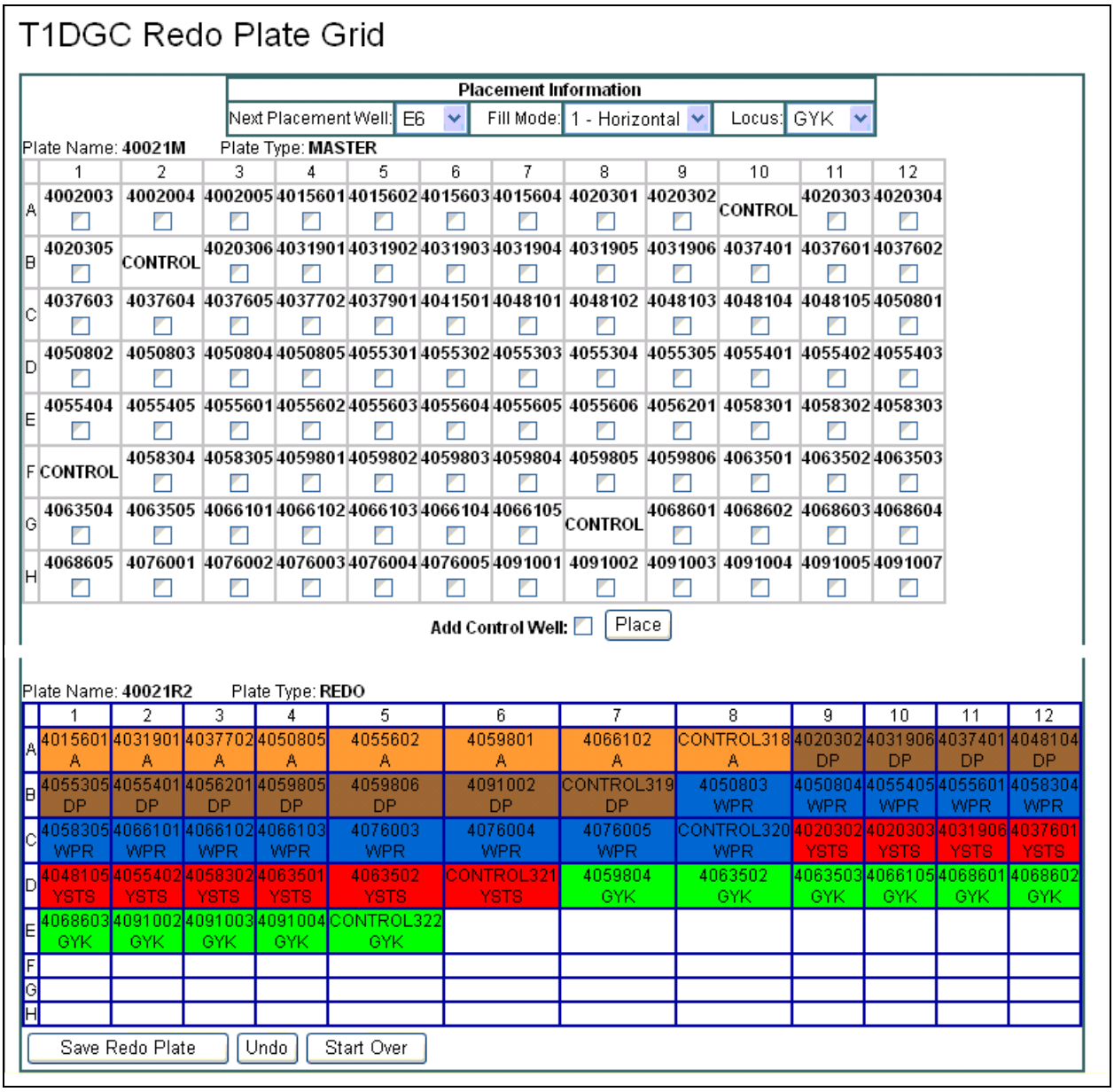


Figure 28. Redo plate grid (after redo plate grid filled).

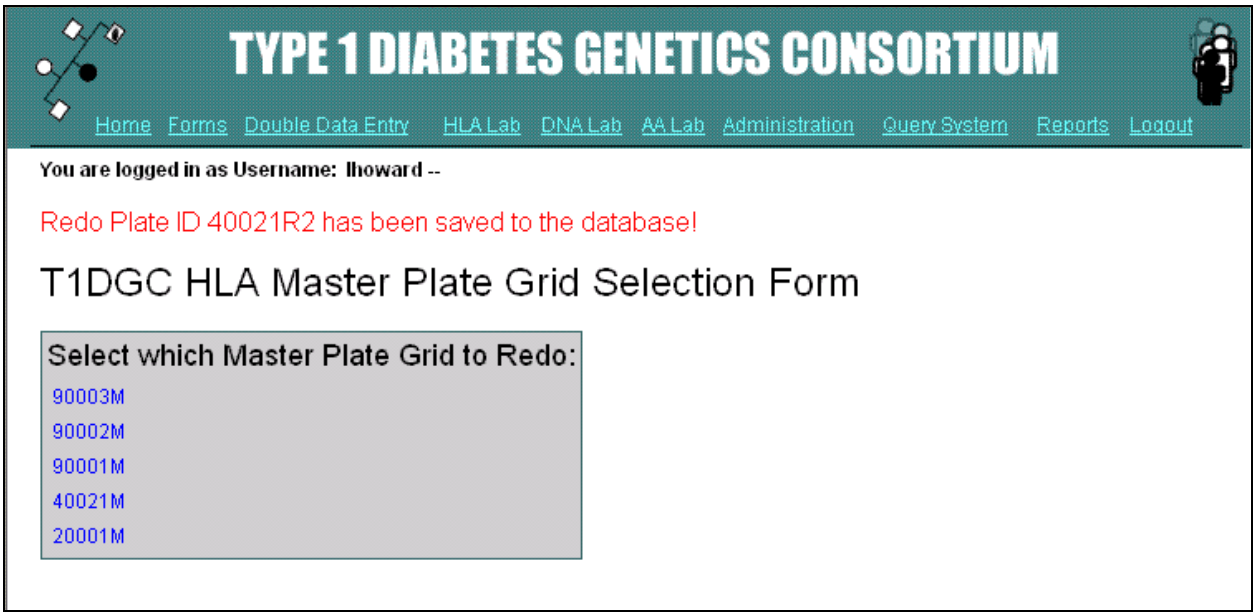


Figure 29. HLA master plate grid selection form (after redo plate grid has been saved).

N. Redo Plate Grid Report

1. When the HLA Genotyping Laboratory user accesses the Redo Plate Grid Report, a list of available Redo Plate Grids is displayed (Figure 30).

2. Click on the Redo Plate Grid to be printed. The print dialogue box is displayed over the Redo Plate Grid Report (Figure 31). The Redo Plate Grid Report displays all Master Plate Grids, along with the Redo Plate Grid.
   a. If the printed page does not fit on one sheet, try printing in Landscape.
   b. Note that if the orientation is changed to landscape, all subsequent pages printed from the browser will print in landscape mode. To change the print orientation back, click “File” and select “Page Setup.”

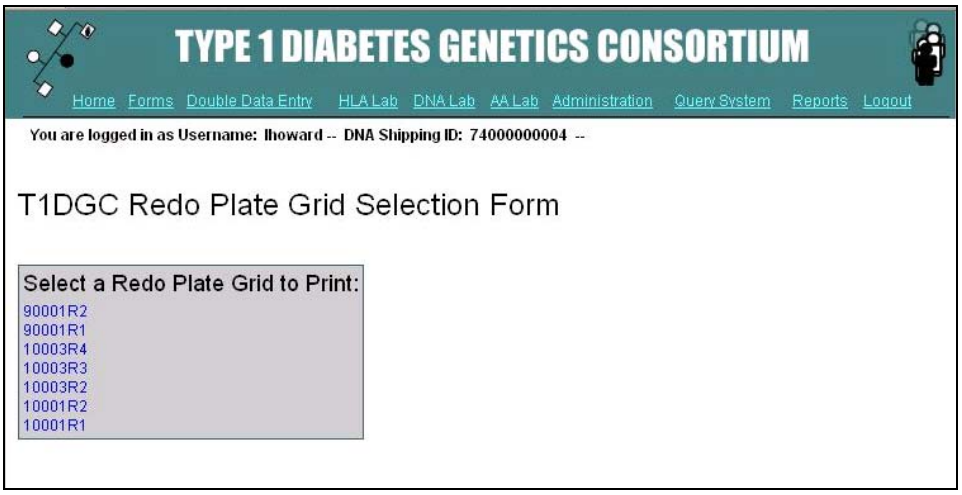


Figure 30. List of redo plate grids available to print.

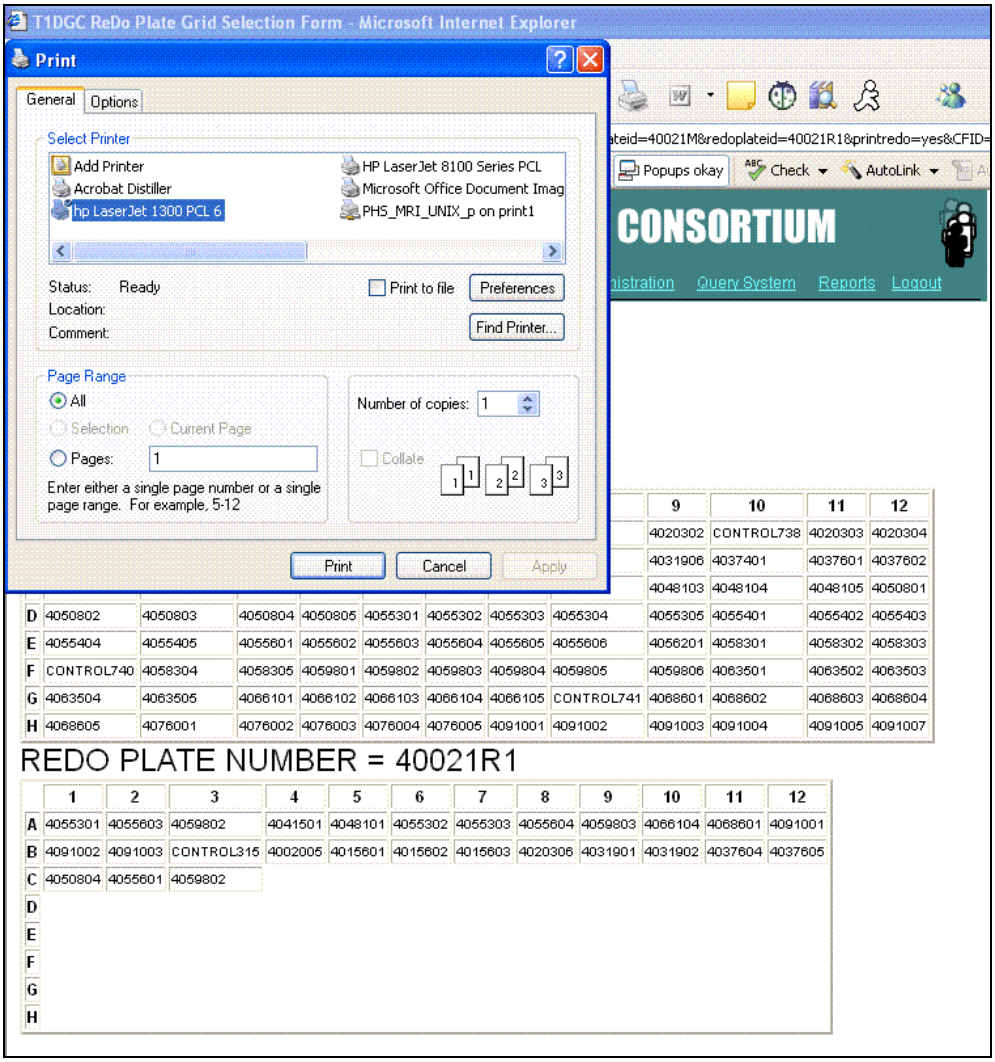


Figure 31. Redo plate grid report.

O. Redo-to-Master Plate Grid Report

1. When the HLA Genotyping Laboratory user accesses the Redo-to-Master Plate Grid Report, a list of available Redo Plate Grids is displayed (Figure 32).

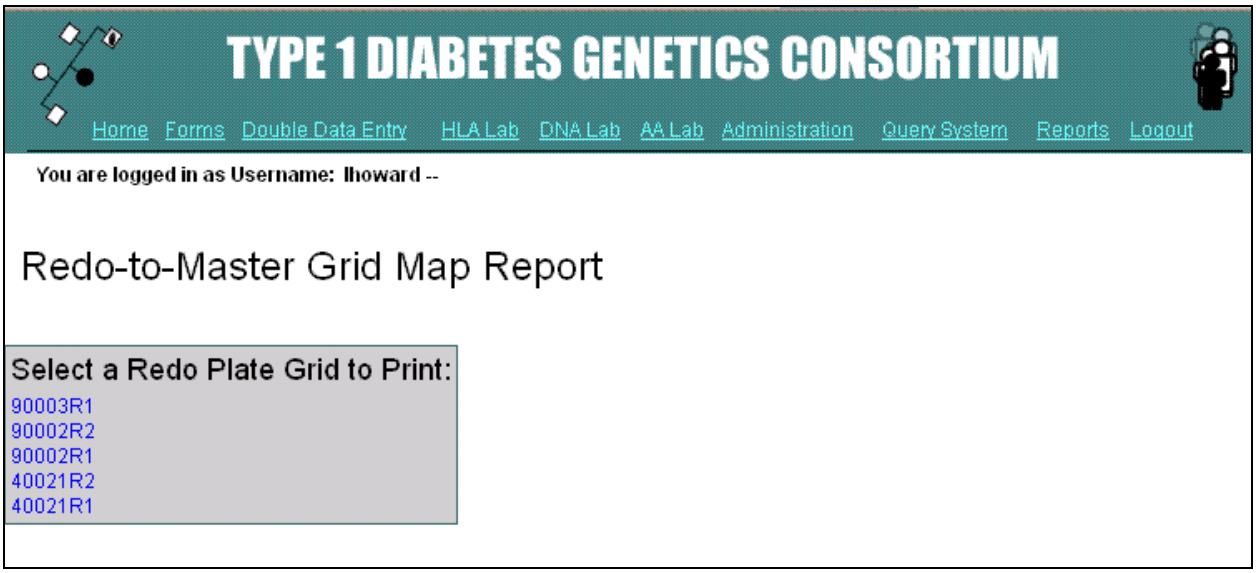


Figure 32. List of redo plate grids available to print.

2. Click on the Redo Plate Grid to be printed. The print dialogue box is displayed over the Redo-to-Master Plate Grid Report (Figure 33). The Redo-to-Master Plate Grid Report lists the participant ID, followed by the locus, followed by the well that contains the participant ID on the Master Plate Grid in each well of the Redo Plate Grid.
   a. If the printed page does not fit on one sheet, try printing in Landscape.
   b. Note that if the orientation is changed to landscape, all subsequent pages printed from the browser will print in landscape mode. To change the print orientation back, click “File” and select “Page Setup.”

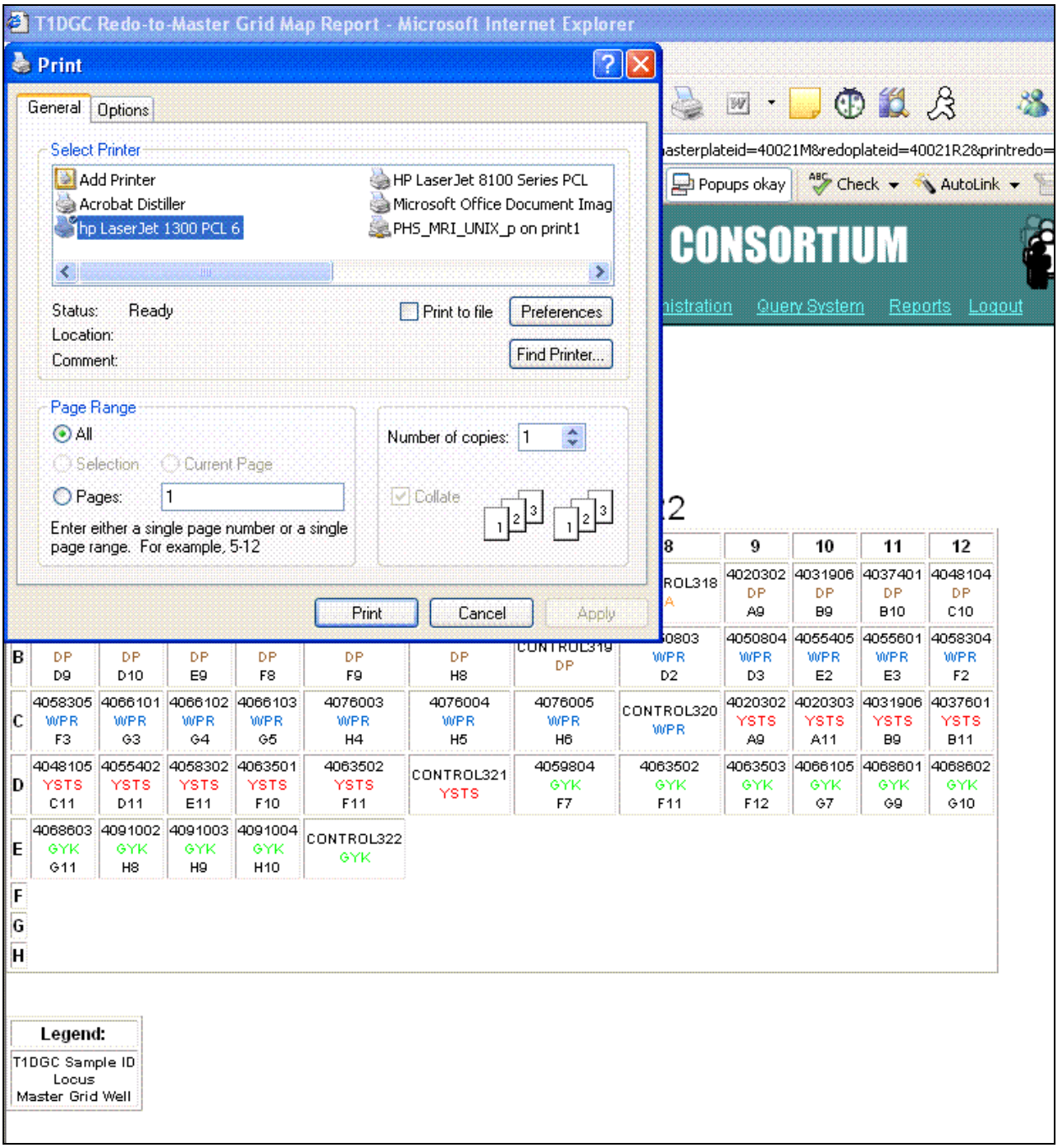


Figure 33. Redo-to-master grid report.

P. Cancel Plate Grid

1. The “Cancel Plate Grid” link should only be used **only on rare occasions**.

2. When the HLA Genotyping Laboratory user accesses this link, a drop down box displays the type of Plate Grid to cancel (Figure 34).
   a. To view all the Master Plate Grids available, click “Master Plate Grid”.
   b. To view all the Sub-typing Plate Grids available, click “Sub-typing Plate Grid”.
   c. To view all the Redo Plate Grids available, click “Redo Plate Grid”.
   d. To view all available Plate Grids, click “All Plates”.

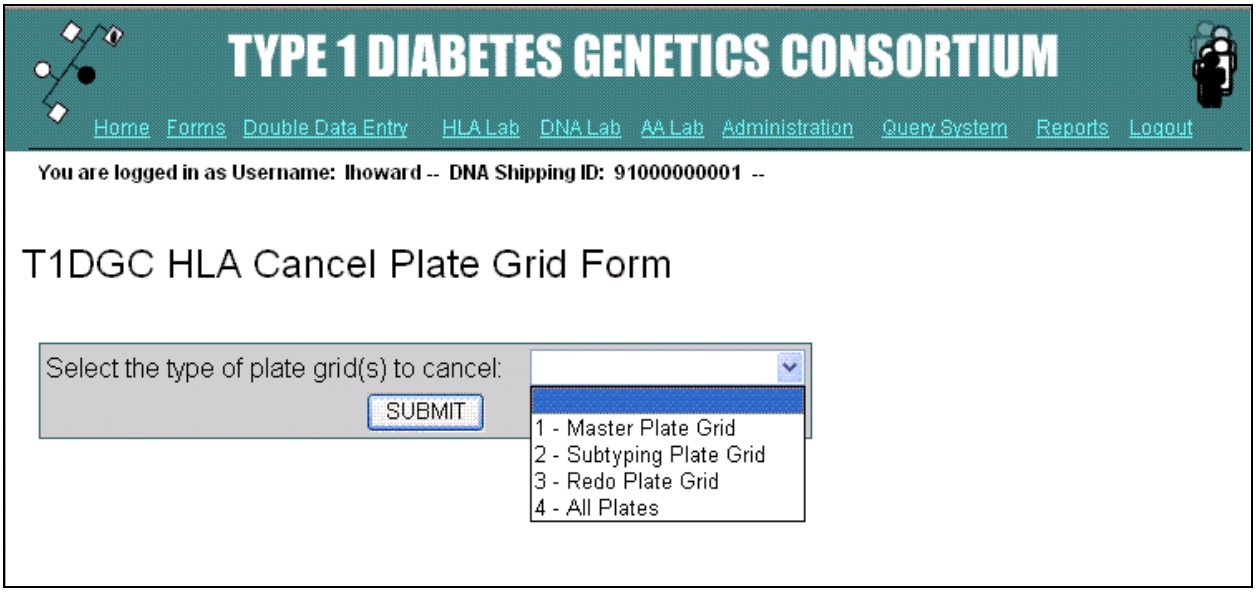


Figure 34. Cancel plate grid form.

3. Once the HLA Genotyping Laboratory user has selected a plate type, a list of plates that can be cancelled is displayed (Figure 35).
   a. **If the HLA Genotyping Laboratory user wants to cancel a Master Plate Grid that has Sub-typing Plate Grids associated with it, first cancel the Sub-typing Plate Grids associated with the Master Plate Grid to be cancelled.**
   b. **An asterisk (*) will appear beside any Plate Grids that have an associated Redo Plate Grid. If a Master Plate Grid has a Redo Plate Grid associated with it, the Redo Plate Grid must be cancelled before the Master Plate Grid can be cancelled.**

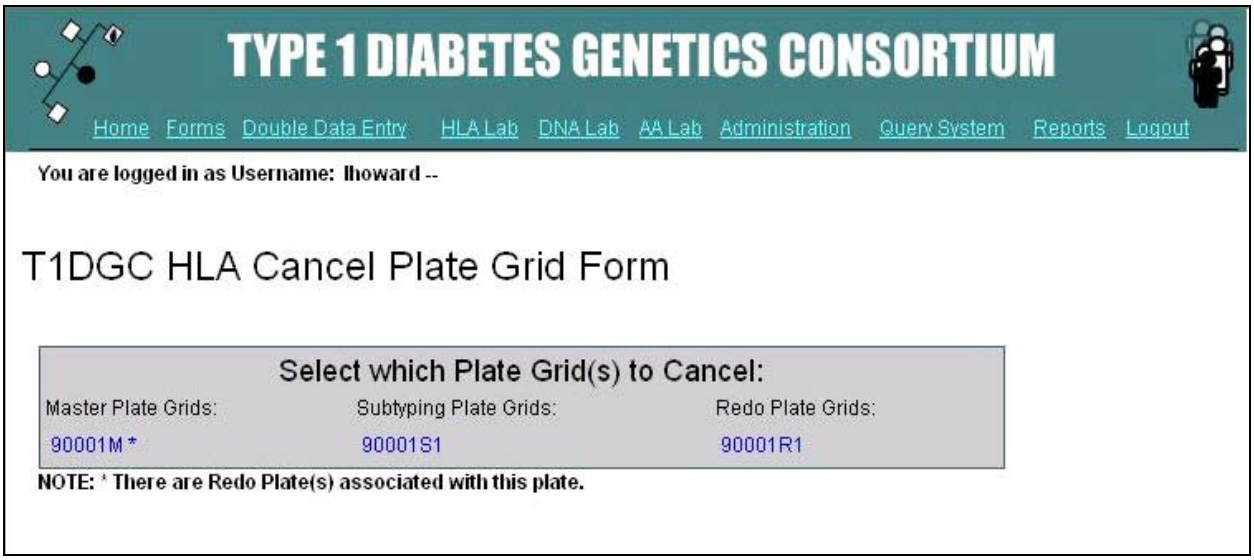


Figure 35. Cancel plate grid form selection.

4. Click on the Plate Grid to be cancelled.

5. The HLA Genotyping Laboratory user will confirm the selection (Figure 36). If "yes" is clicked, the plate grid will be permanently cancelled and the IDs associated with that shipment will be available to create a new plate grid.

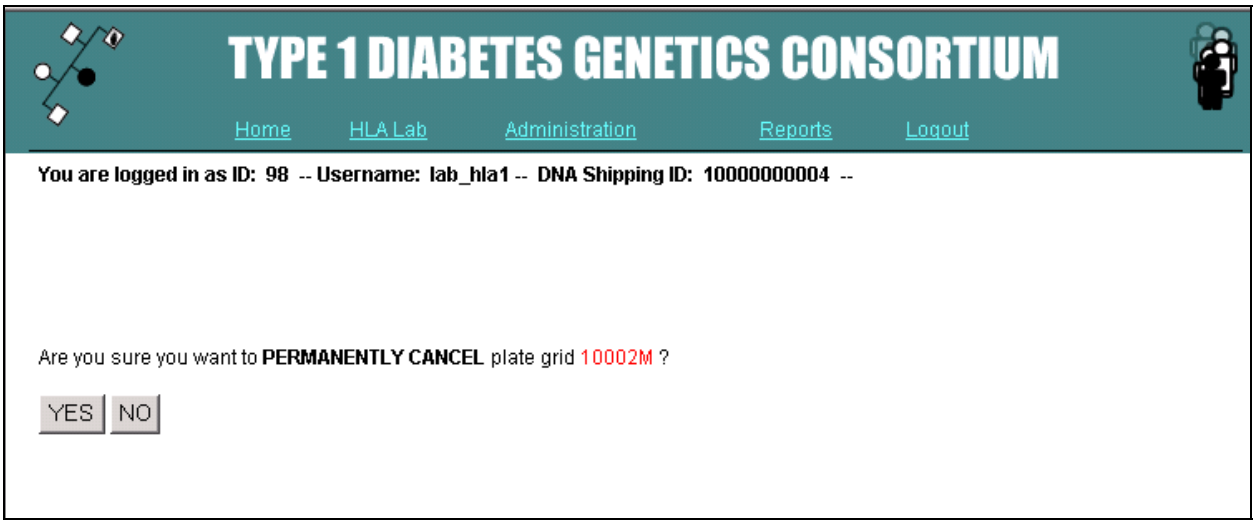


Figure 36. Cancel plate grid form confirmation.

Q. HLA Sample File Download

1. The Sample File Download Form is used to download the text files **used in StripScan.**

2. When the HLA Genotyping Laboratory user accesses this link, a drop down box displays the type of plate grid to download (Figure 37).
   a. To view all the Master Plate Grids available, click “Master Plate Grids”.
   b. To view all the Sub-typing Plate Grids available, click “Sub-typing Plate Grids”.
   c. To view all the Redo Plate Grids available, click “Redo Plate Grids”.
   d. To view all of the plate grids available, click “All Plates”.

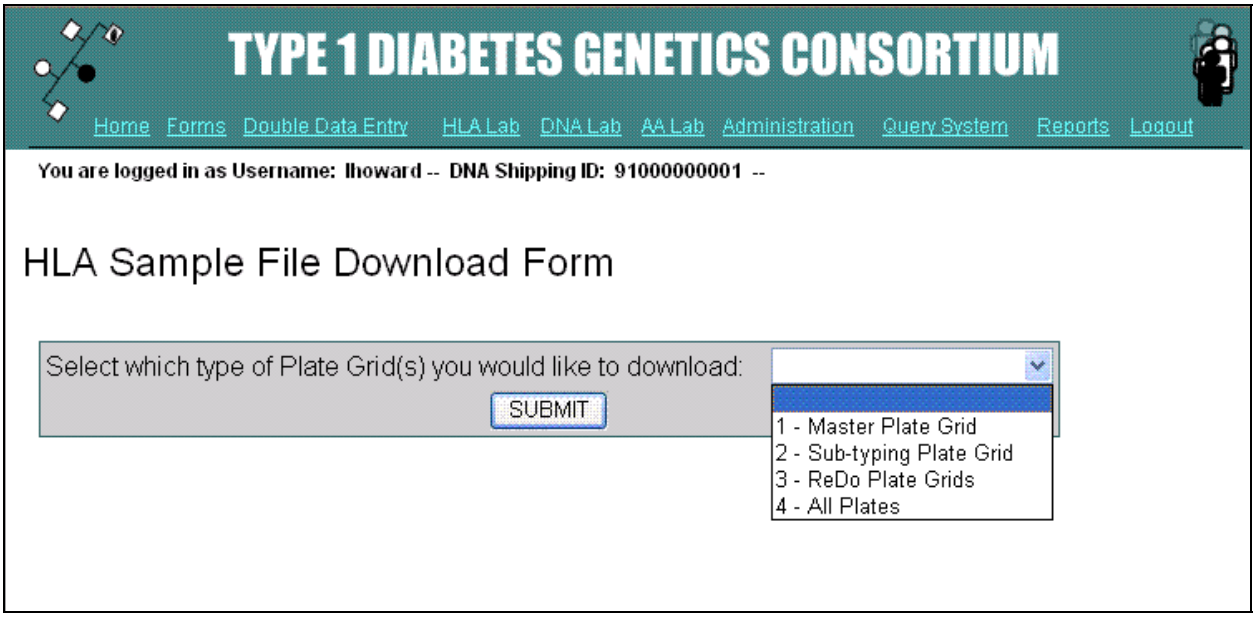


Figure 37. Sample file download form.

3. Once a plate type is selected, a list of files that can be downloaded is displayed (Figure 38).

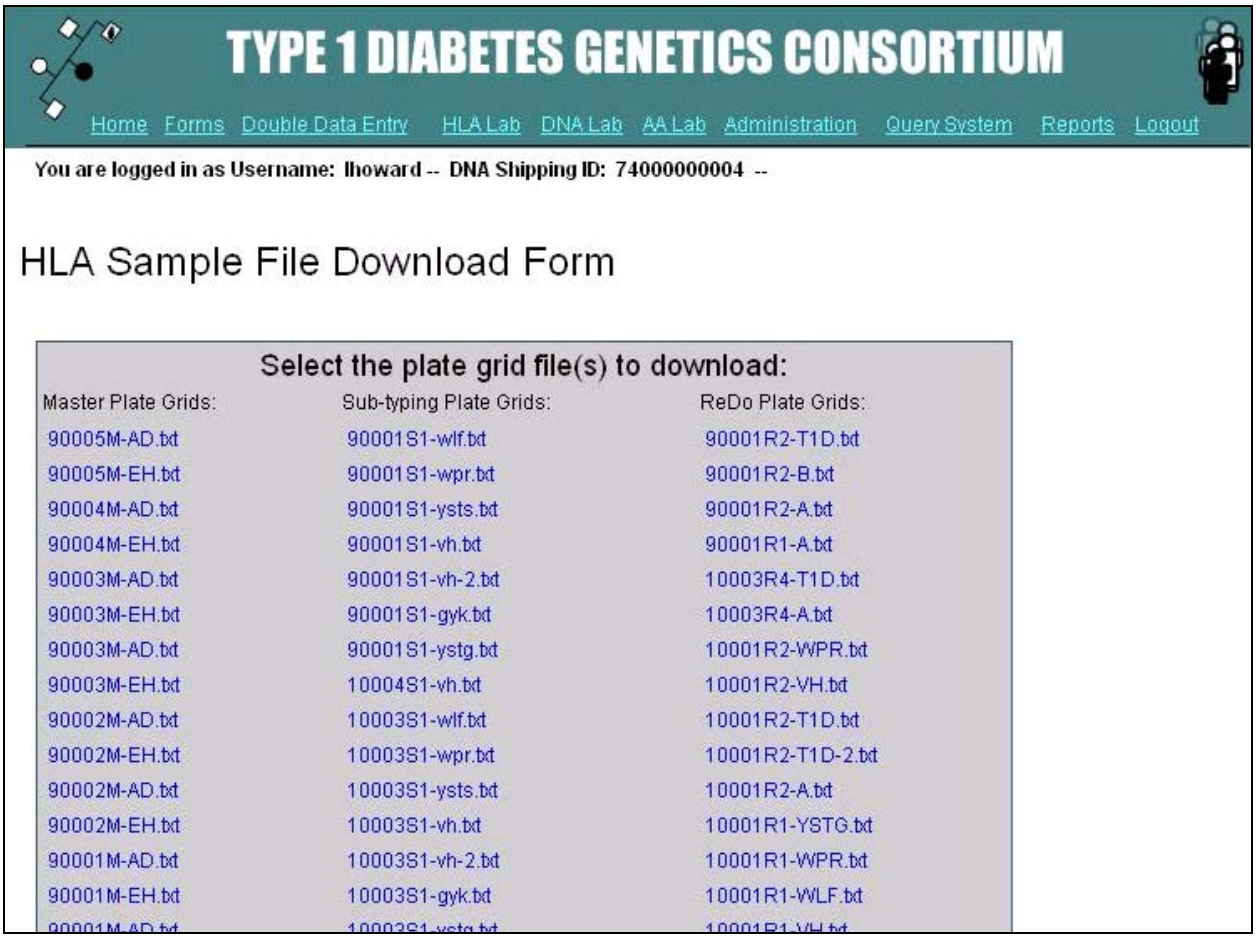


Figure 38. Sample file download form selection.

4. Click on the link to be downloaded.

5. The HLA Genotyping Laboratory user will be asked what to do with the file. Select “Save this file to disk”, choose a location to which to save the file, and press “Save” (Figure 39). The file should always be saved to the file directory downloaded when StripScan was downloaded.

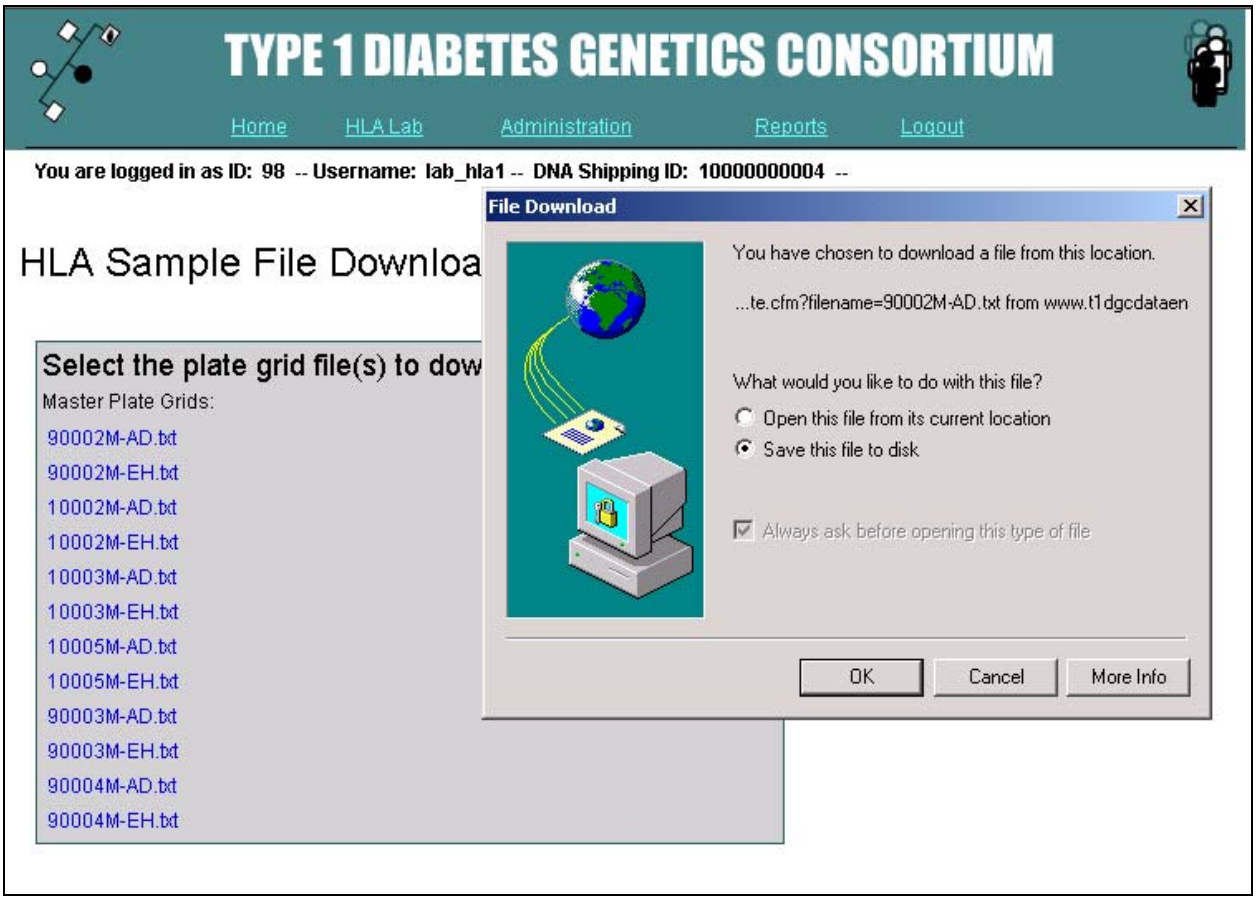


Figure 39. Sample file download form confirmation.

7. **Prior to saving any of the HLA files, use StripScan to create a directory structure and save these files into the folders created by the StripScan software.**

   a. If sample files have been downloaded properly and are up-to-date, StripScan will manage plate grid names and identifiers, with the exception of re-dos.

   b. StripScan permits editing the plate grid name and sample identifiers, but this should not be used, with the exception of re-dos.

   c. StripScan will create a file folder for each locus (A, B, C, DP, DQ, T1D) and the DRB1 subtypes (GYK, WLF, WPR, VH, YSTS, and YSTG).

   d. Store sample import files corresponding to Master Plate Grids and Sub-typing Plate Grids for <plate number>. These files are used for importing

Plate Grid T1DGC sample identifiers into StripScan; the file extension is ".txt".

e. For a full Master Plate Grid (*i.e.*, 92 samples and 4 negative controls), there will be two StripScan import files: upper (AD) and lower (EH). This is due to the BeeBlot capacity of 48 samples which necessitates the "splitting" of plates into separate BeeBlot runs for the upper (rows A through D) and lower (rows E through H) halves. For example, a full Master Plate Grid (Plate Number: 40005M) would have 2 import files named 40005M-AD.txt and 40005M-EH.txt.

f. Sub-typing assay file names include the Sub-typing Plate Grid number and the specific assay name. For example, a sub-typing file for YSTS could be named 40005S1-YSTS.txt.

g. There may be more than one Sub-typing Plate Grid for a given Master Plate Grid. In this event, the files could be named 40005S1-YSTS.txt, 40005S1-VH.txt, 40005S1-GYK.txt, and 40005S2-YSTG. This would indicate that the first three sub-typing assays were on the first Sub-typing Plate Grid and the fourth assay was on a second Sub-typing Plate Grid.

h. It may not be necessary to perform all six sub-typing assays for the samples on the Master Plate Grid. A sub-type assay should be contained to one plate grid (*i.e.*, avoid splitting an assay across Sub-typing Plate Grids).

i. In the rare event that more than 48 samples on a Master Plate Grid require a specific sub-type assay (*e.g.*, YSTS), split the assay across two BeeBlot runs. There will be two StripScan files for the same assay. For example, these files would be named as 40005S1-YSTS.txt and 40005S1-2.txt.

R. HLA File Upload

1. The HLA File Upload is used to upload the **xml file from SCORE.**

2. When the HLA Genotyping Laboratory user accesses this link, a page is displayed with a form on the left side of the screen and list on the right side of the screen (Figure 40).

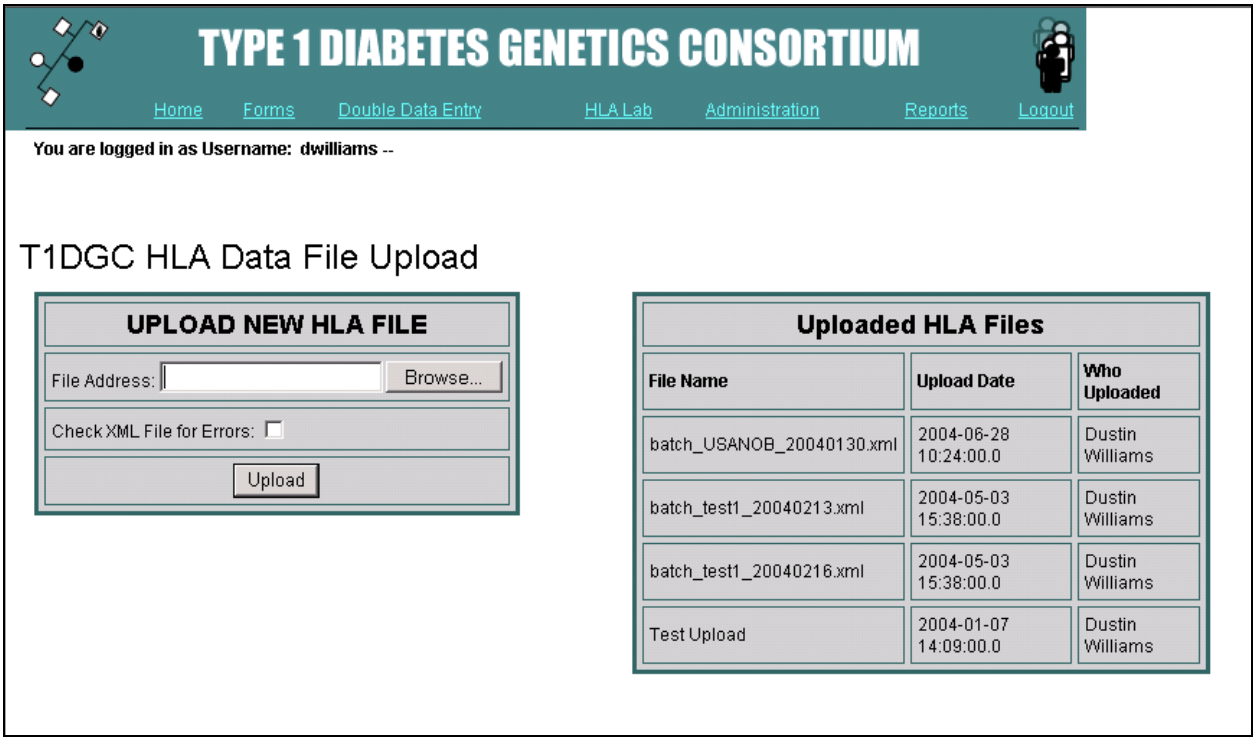


Figure 40. File upload form.

3. The files listed on the right are files previously uploaded by the HLA Genotyping Laboratory user's network. Note that files are named in the SCORE program as <Batch_LabID_YYYYMMDD>.

4. The form on the left is used to upload new files.
   a. To upload a file, click "Browse" to locate the file on the computer. Click "Open" or double click on the file to submit the file address.
   b. To check the xml file (generated by SCORE) for errors before a final upload, click the box next to "Check XML File for Errors:" and press the

"Upload" button (Figure 41). **When a file is checked for errors, it does not save to the database.**

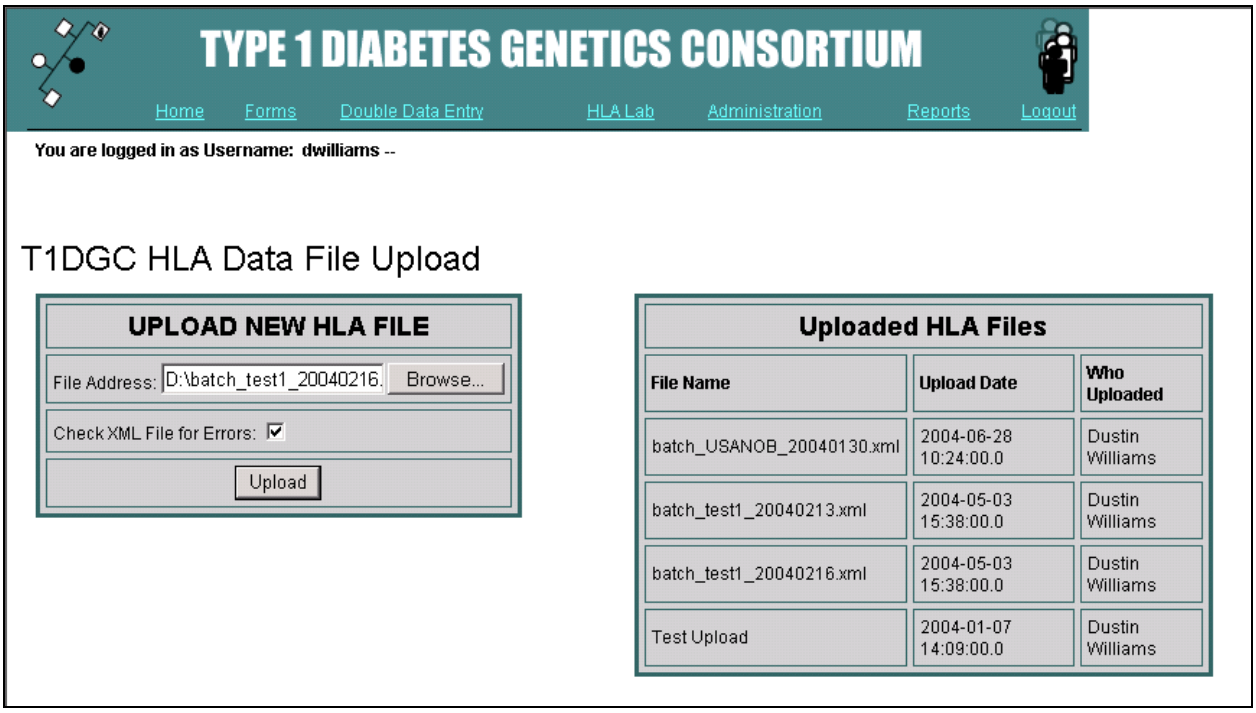


Figure 41. xml file check to identify mistakes prior to final upload.

c. If there are any errors, a list will be displayed with a description (Figure 42).

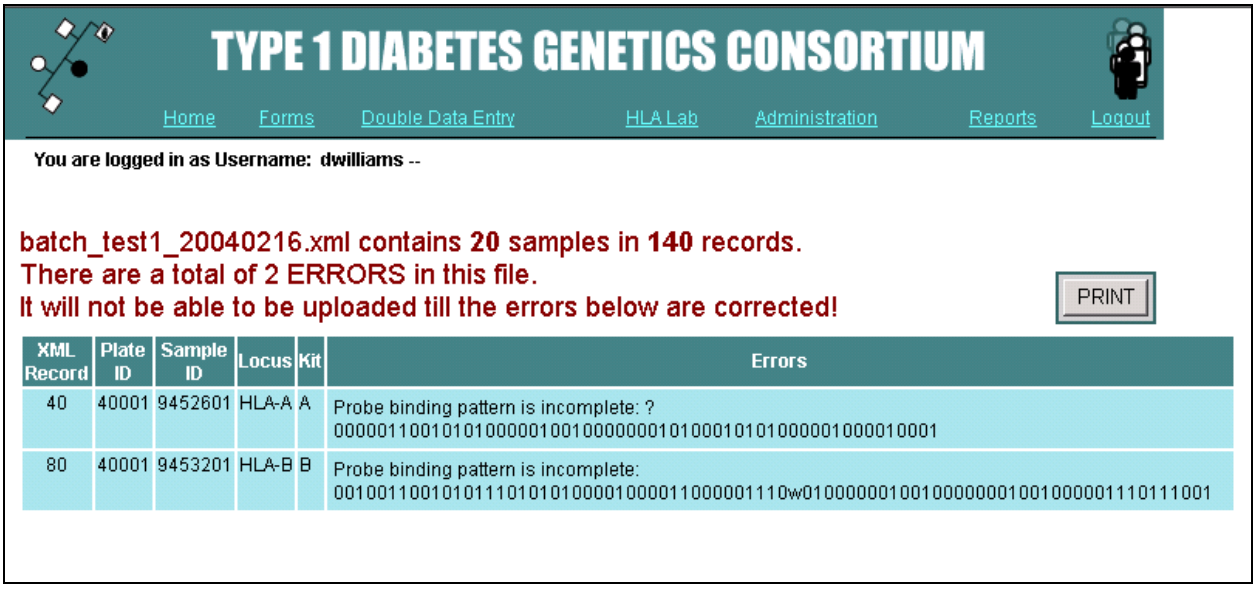


Figure 42. xml file check lists the mistakes and errors in the file.

d. Click the “Print” button to print the error report in the file (Figure 43).

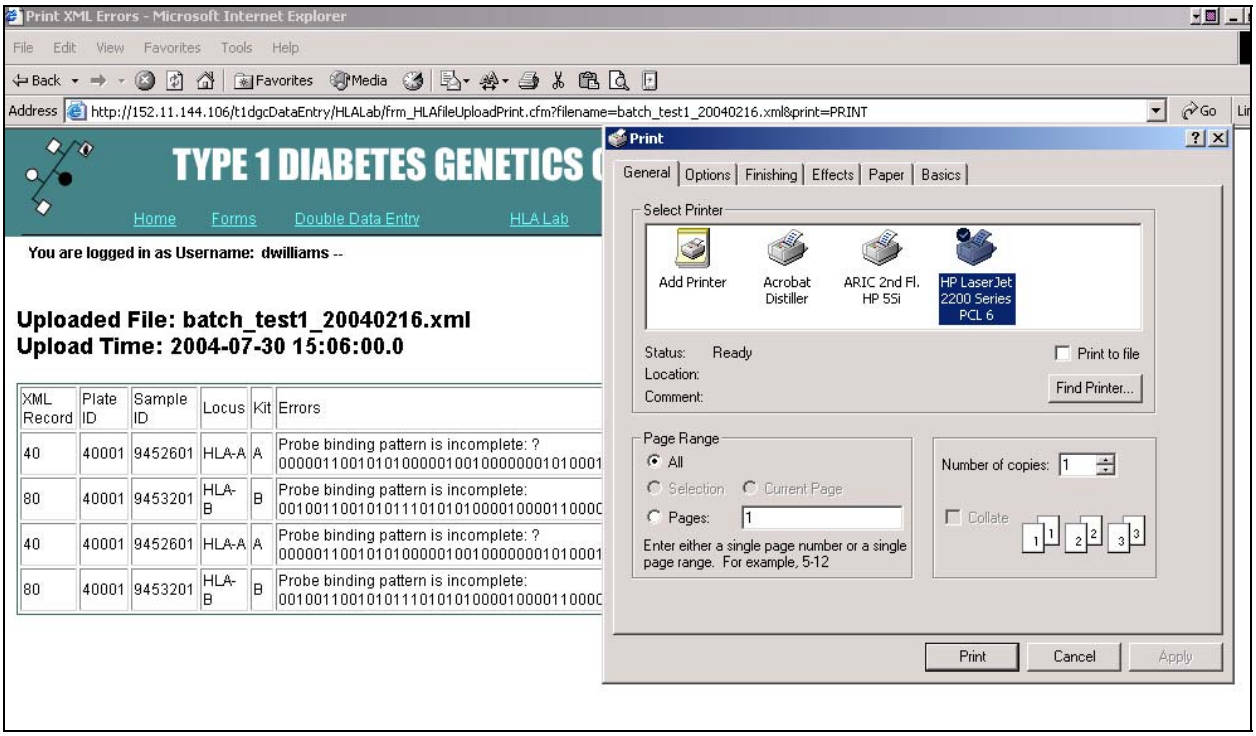


Figure 43. Print the list of errors from the xml file.

e. When the HLA Genotyping Laboratory user is satisfied with the file and ready to upload the information to the Coordinating Center, enter the file name and **do not** mark “Check xml file for errors.” If there are no errors, the file will upload and appear on the uploaded file list (on the right hand side of the screen) as the last uploaded file (Figure 44). If there are errors, the file will not upload and will not appear on the uploaded file list. The HLA Genotyping Laboratory user will receive the error report indicating the errors remaining in the file (Figure 42).

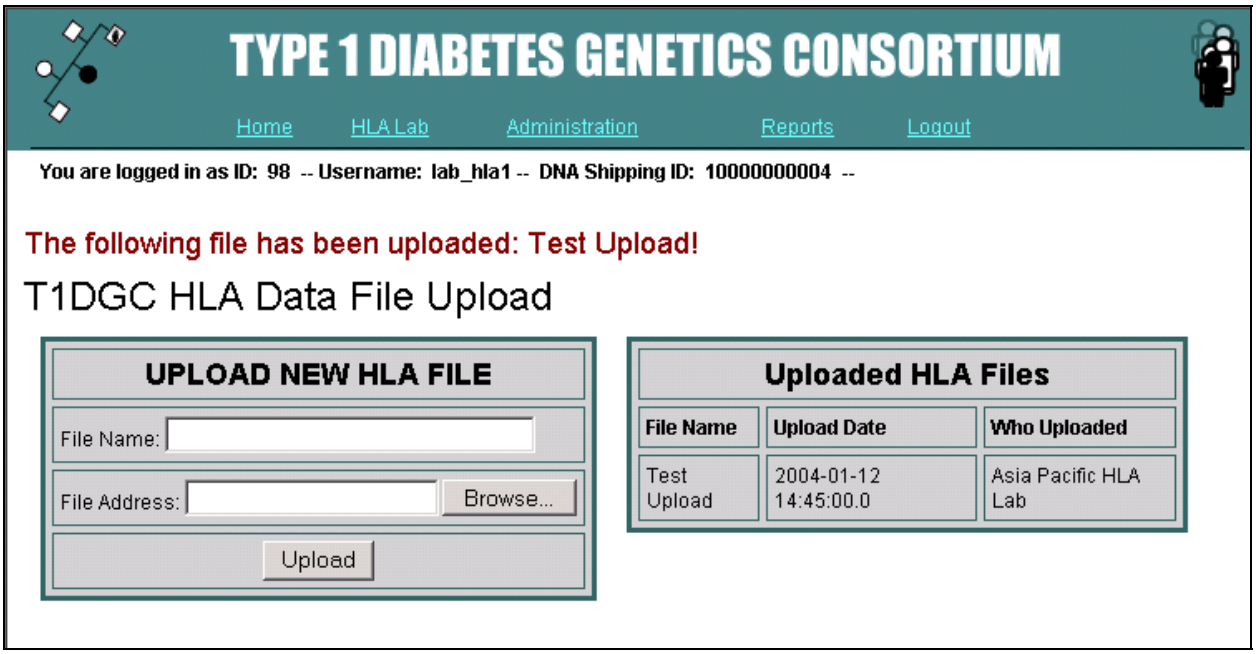


Figure 44. File upload form confirmation.

S. Probe Binding Report

The probe binding report is a downloadable, comma separated value formatted file that is easily imported into Microsoft Excel. This is a cumulative file containing the probe binding and pixel value results for each assay. Results are identified by plate, well, participant ID, locus, and kit name.

The HLA Genotyping Laboratory user will be asked what to do with this file. Select “Save this file to disk”, choose a location to which to save the file, and press “Save” (Figure 45).

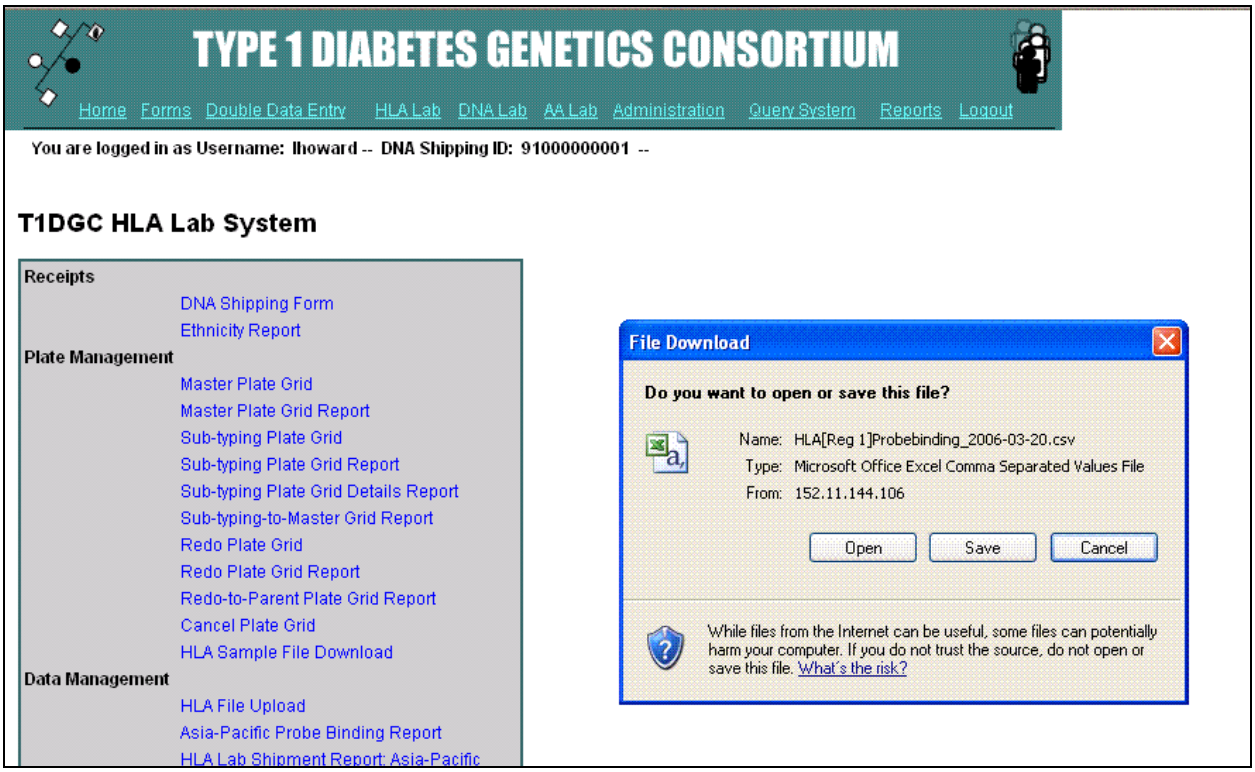


Figure 45. Saving probe binding report to the HLA Genotyping Laboratory user's hard drive.

T. HLA Laboratory Shipment Report

This dynamic report incorporates comprehensive information about each shipping ID, including plates associated with the shipping ID, date received, date completed, number of re-dos, status of plates, status of PedCheck and links to the associated sub-typing and master plate grids, as well as the shipping form (Figure 46). The report can be printed by selecting "Print" from the web browser menu.

HLA Lab Shipments
Asia-Pacific
Report on Data Last Processed: 15:45 Tuesday, 14MAR06

Shipment	Source	Plate Type	Date Shipped	Date Received	Date 1st Plating	Date Completed	Samples Plated	Samples Left	Shipment Grid(s)	# Replace Samples	# Class I Redos	# Class II Redos	Passed Pedcheck	Pedcheck Report	Shipment Status
1-0000001071	AP-DNA	Production	10NOV2004	10NOV2004	09NOV2004	11APR2005	96	0	10006M	0	26	2	Yes		Completed
									10006S1						
									10006S2						
1-0000001073	AP-DNA	Production	05JAN2005	05JAN2005	04JAN2005	24AUG2005	96	0	10008M	0	22	1	Yes		Completed
									10008S1						
									10008S2						
									10008S3						
1-0000001074	AP-DNA	Production	23FEB2005	23FEB2005	22FEB2005	13APR2005	96	0	10009M	0	11	23	Yes		Completed
									10009S1						
									10009S2						
1-0000001076	AP-DNA	Production	21MAR2005	21MAR2005	20MAR2005	01SEP2005	96	0	10010M	8	12	31	Yes (N-P)		Completed
									10010S1						
									10010S2						
1-0000001077	AP-DNA	Production	11APR2005	11APR2005	10APR2005	06SEP2005	96	0	10011M	8	40	110	Yes		Completed
									10011S1			56			
									10011S2						
1-0000001078	AP-DNA	QC	27JUN2005	28JUN2005	27JUN2005	08AUG2005	96	0	10012M	0	11	96	Yes		Completed
									10012S1			2			
									10012S2						
1-0000001079	AP-DNA	Production	02AUG2005	02AUG2005	01AUG2005	18AUG2005	96	0	10013M	0	11	62	Yes		Completed

Figure 46. HLA laboratory shipment report.

U. HLA Laboratory Grid Report

This dynamic report incorporates comprehensive information about each plate, including date the plate was created, number of samples, number of replacement samples, number of re-dos, number of genotypes, information from PedCheck, and status of each plate (Figure 47). The HLA Genotyping Laboratory user is able to click on any Master Plate ID and receive the same information about any sub-typing plates associated with the Master Plate (Figure 48). Both of these reports can be printed by selecting “Print” from the web browser menu.

HLA Lab Grid Summary

Asia-Pacific

Report on Data Last Processed: 15:45 Tuesday, 14MAR06

Grid	Type	Creation Date	Samples Plated	# Replace Samples	# Class I Redos	# Class II Redos	# Genotypes	# Genotypes (Non-Control)	Passed Pedcheck	Pedcheck Report	Shipment Status
10018	Production	16FEB2006	96	0			0	0			WIP
10017	Production	17NOV2005	96	0			960	920	No	10017	WIP
10016	Production	01NOV2005	96	0	27	12	960	920	Yes		Completed
10015	Production	21SEP2005	96	0	39	7	960	920	Yes		Completed
10014	Production	05SEP2005	96	0	12	5	960	920	Yes		Completed
10013	Production	01AUG2005	96	0	11	62	960	920	Yes		Completed
10012	QC	27JUN2005	96	0	11	98	960	920	Yes		Completed
10011	Production	10APR2005	96	8	40	166	960	920	Yes		Completed
10010	Production	20MAR2005	96	8	12	31	960	920	Yes (N-P)		Completed
10009	Production	22FEB2005	96	0	11	23	960	920	Yes		Completed
10008	Production	04JAN2005	96	0	22	1	960	920	Yes		Completed
10007	Cancelled										--
10006	Production	09NOV2004	96	0	26	2	960	920	Yes		Completed
10005	Certification	11AUG2004	24	0			220	200			Completed
10004	Certification		24	0			200	200			Completed
10003	Cancelled										--
10002	Cancelled										--
10001	Cancelled										--

This request took 0.34 seconds of real time (v8.2 build 1391).

Figure 47. HLA laboratory grid report.

Grid Plates

Grid Number: 10018

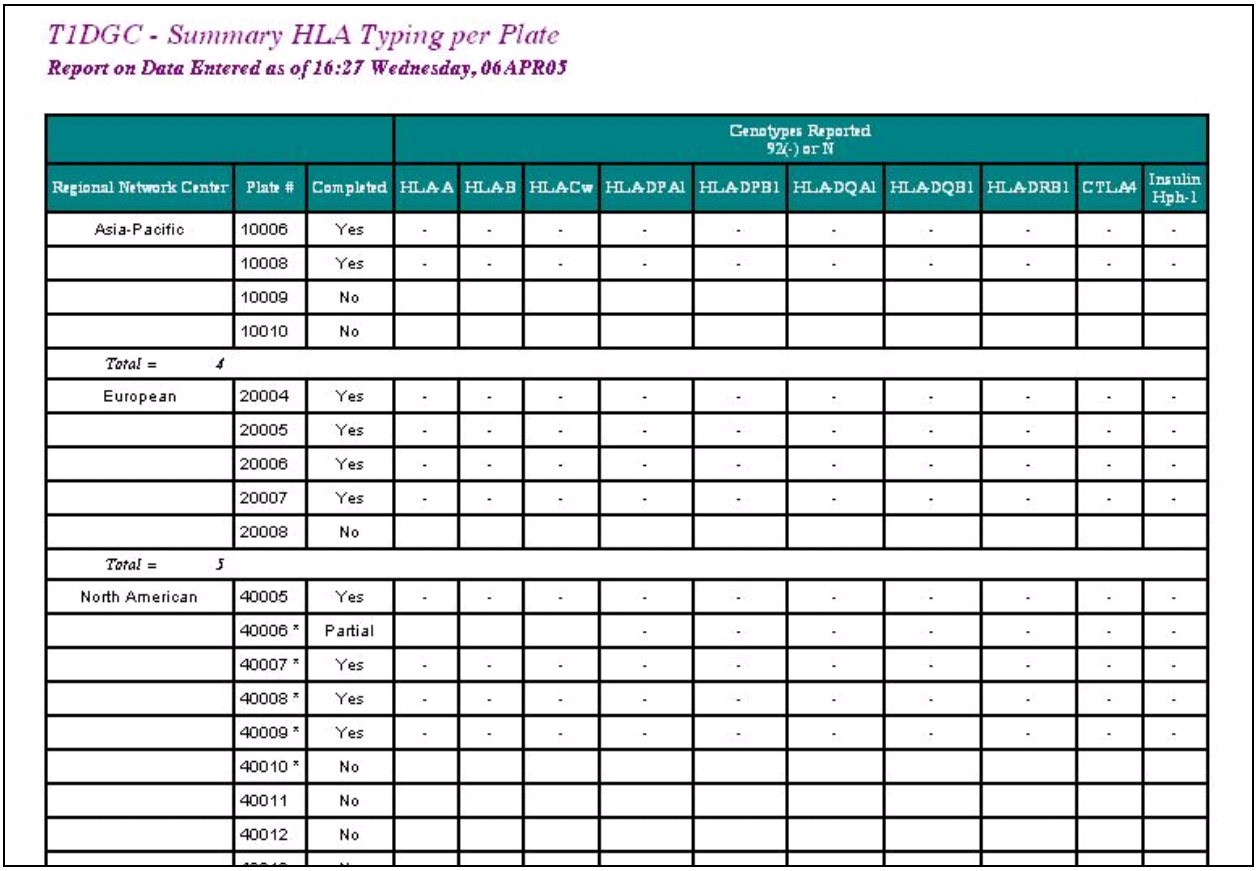
Grid	Type	Creation Date	Samples Plated	# Replacement Samples	# Class I Redos	# Class II Redos	Shipment Status
10018S2	Production	20FEB2006	76				WIP
10018S1	Production	20FEB2006	92				WIP
10018M	Production	16FEB2006	96	0			WIP

This request took 0.39 seconds of real time (v8.2 build 1391).

Figure 48. HLA laboratory grid plates.

V. T1DGC HLA Plate Status

This dynamic report summarizes all plates logged into the HLA Laboratory system. The status of each plate is reported: the completion status and the number of genotype results for participants per assay (Figure 49). In addition, the total number of logged plates is tallied for those plates completed or in process. The report can be printed by selecting "Print" from the web browser menu.



T1DGC - Summary HLA Typing per Plate

Report on Data Entered as of 16:27 Wednesday, 06APR05

			Genotypes Reported 92(-) or N									
Regional Network Center	Plate #	Completed	HLA A	HLA B	HLA Cw	HLA DPA1	HLA DPB1	HLA DQA1	HLA DQB1	HLA DRB1	CTLA4	Insulin Hph-1
Asia-Pacific	10006	Yes	-	-	-	-	-	-	-	-	-	-
	10008	Yes	-	-	-	-	-	-	-	-	-	-
	10009	No										
	10010	No										
Total =	*4*											
European	20004	Yes	-	-	-	-	-	-	-	-	-	-
	20005	Yes	-	-	-	-	-	-	-	-	-	-
	20006	Yes	-	-	-	-	-	-	-	-	-	-
	20007	Yes	-	-	-	-	-	-	-	-	-	-
	20008	No										
Total =	*5*											
North American	40005	Yes	-	-	-	-	-	-	-	-	-	-
	40006 *	Partial				-	-	-	-	-	-	-
	40007 *	Yes	-	-	-	-	-	-	-	-	-	-
	40008 *	Yes	-	-	-	-	-	-	-	-	-	-
	40009 *	Yes	-	-	-	-	-	-	-	-	-	-
	40010 *	No										
	40011	No										
	40012	No										

Figure 49. HLA plate status report.

W. HLA Software Support

1. Click on this link to list the SCORE and StripScan files available to be downloaded (Figure 50). (NOTE: HLA Genotyping Laboratories can only download files from this page; specific users have rights to upload the most current version of the software files.)

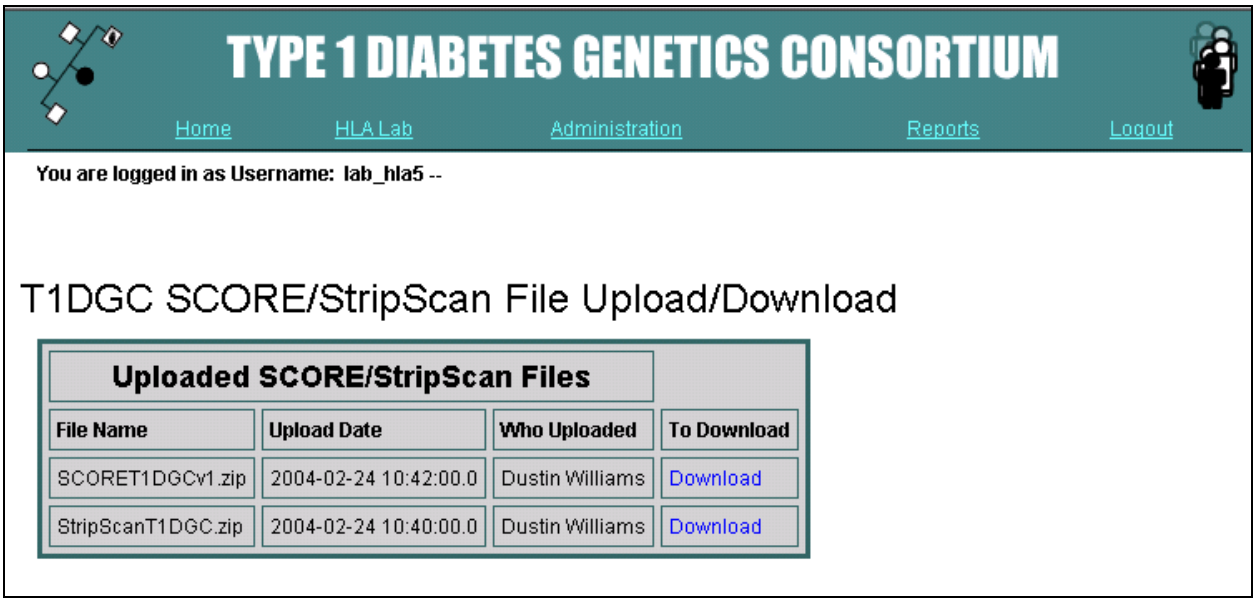


Figure 50. SCORE and StripScan files available for download.

2. To download the current version of SCORE or StripScan, click on the program to be downloaded (Figure 51).

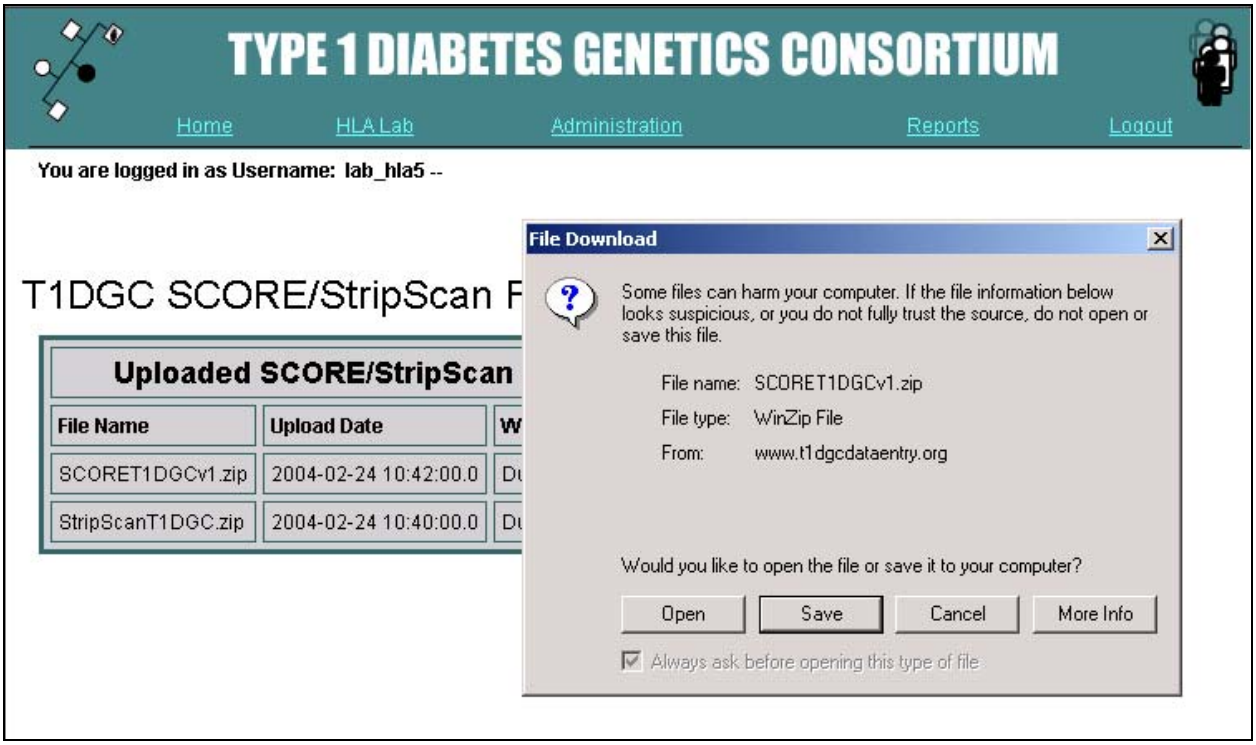


Figure 51. Confirmation that HLA Genotyping Laboratory user wants to download program.

3. Save the zip file to a specific location (Figure 52). Double click the file to unzip it and then double click the .exe file and follow the instructions.

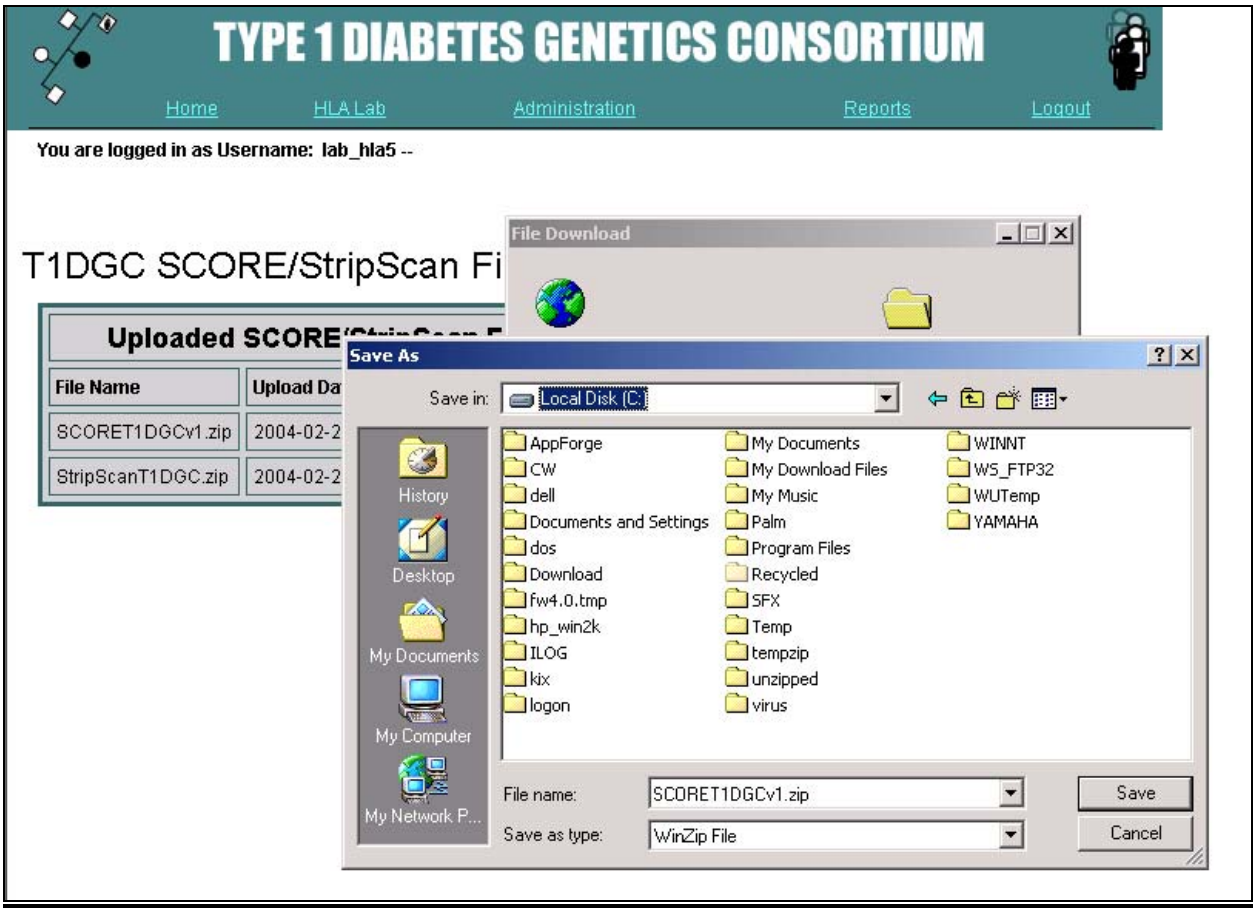


Figure 52. Confirmation of where to save SCORE or StripScan to HLA Genotyping Laboratory user's computer.

4. Once the file has been downloaded to the HLA Genotyping Laboratory user's computer, confirmation that the file has been downloaded will be received (Figure 53).

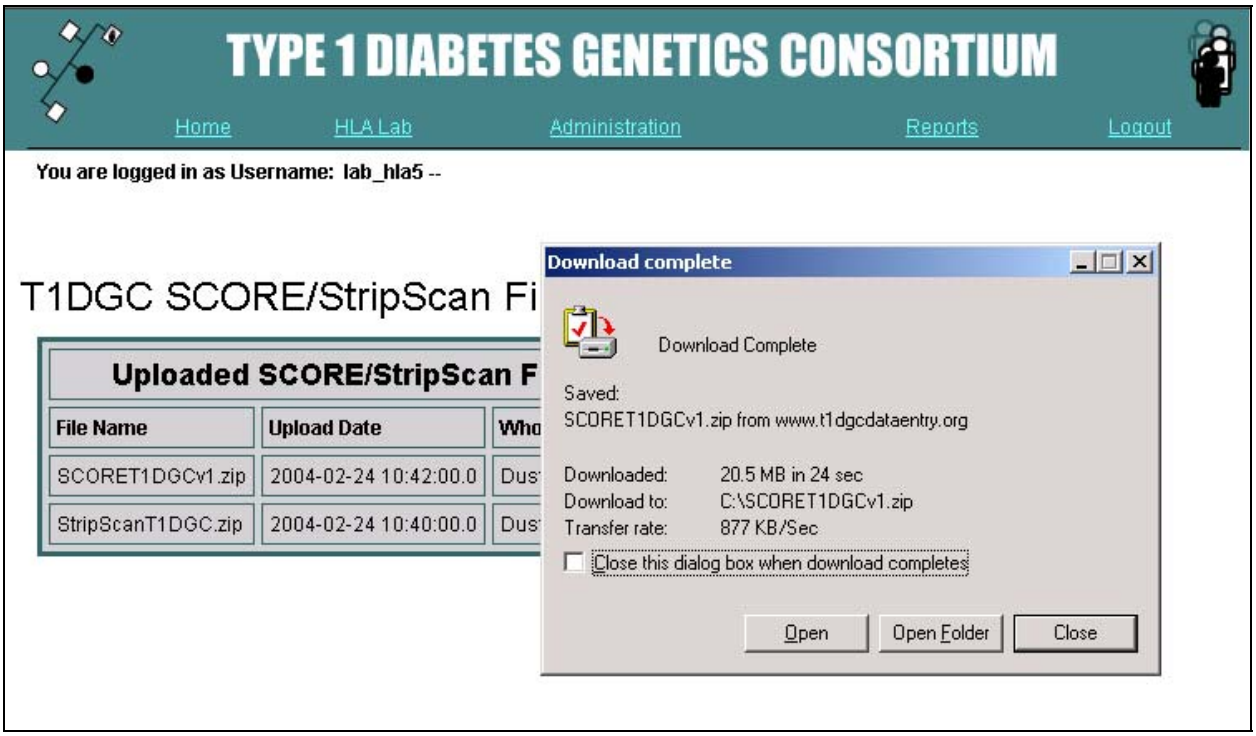


Figure 53. Confirmation that download for SCORE and StripScan is complete.

X. Request for Replacement

1. When the HLA Genotyping Laboratory user accesses the Request for Replacement, the Request for Replacement Form is displayed (Figure 54).

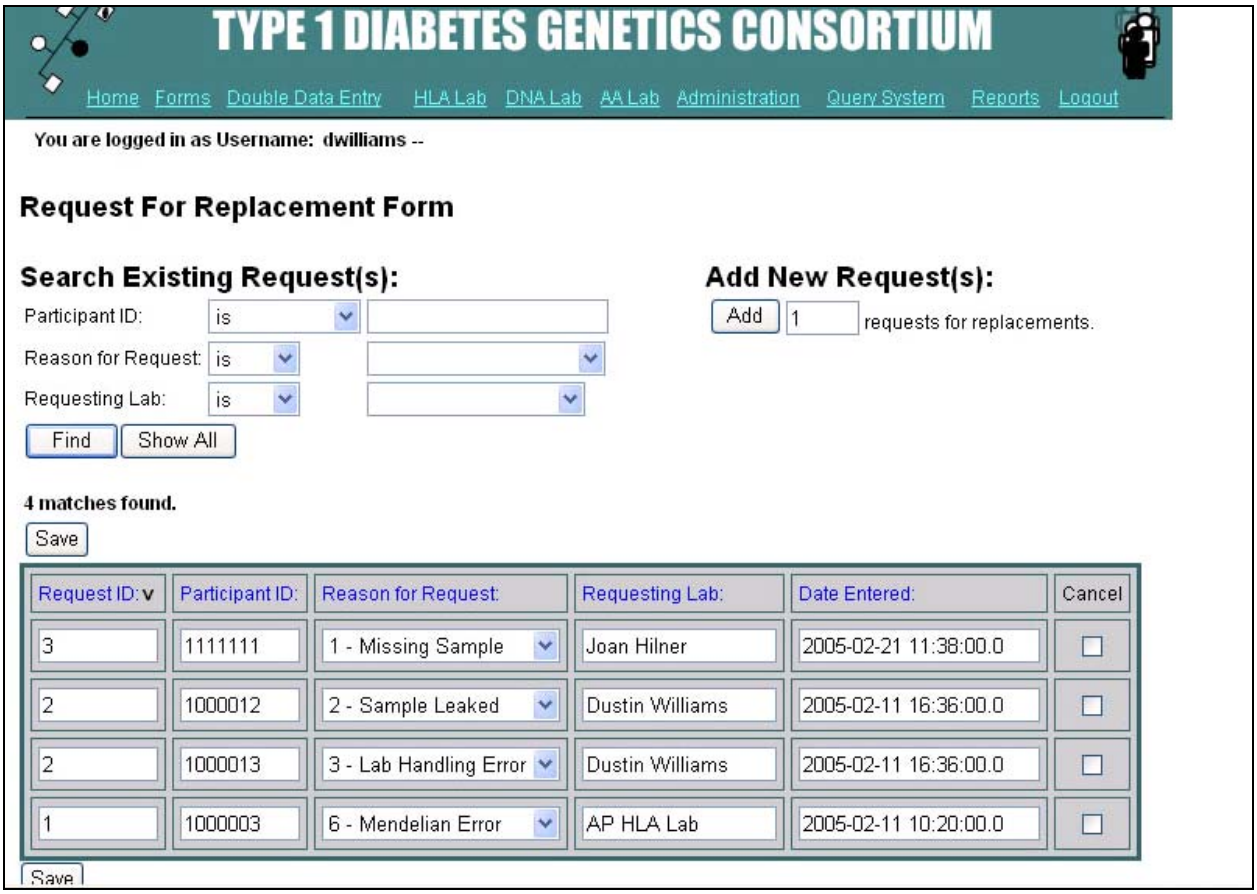


Figure 54. List of previously requested replacement samples.

2. Requesting a Replacement Sample

   a. The HLA Genotyping Laboratory user enters the number of requests needed and clicks the “Add” button.

   b. Entry fields for the number of requests for replacement samples entered will be displayed (Figure 55).

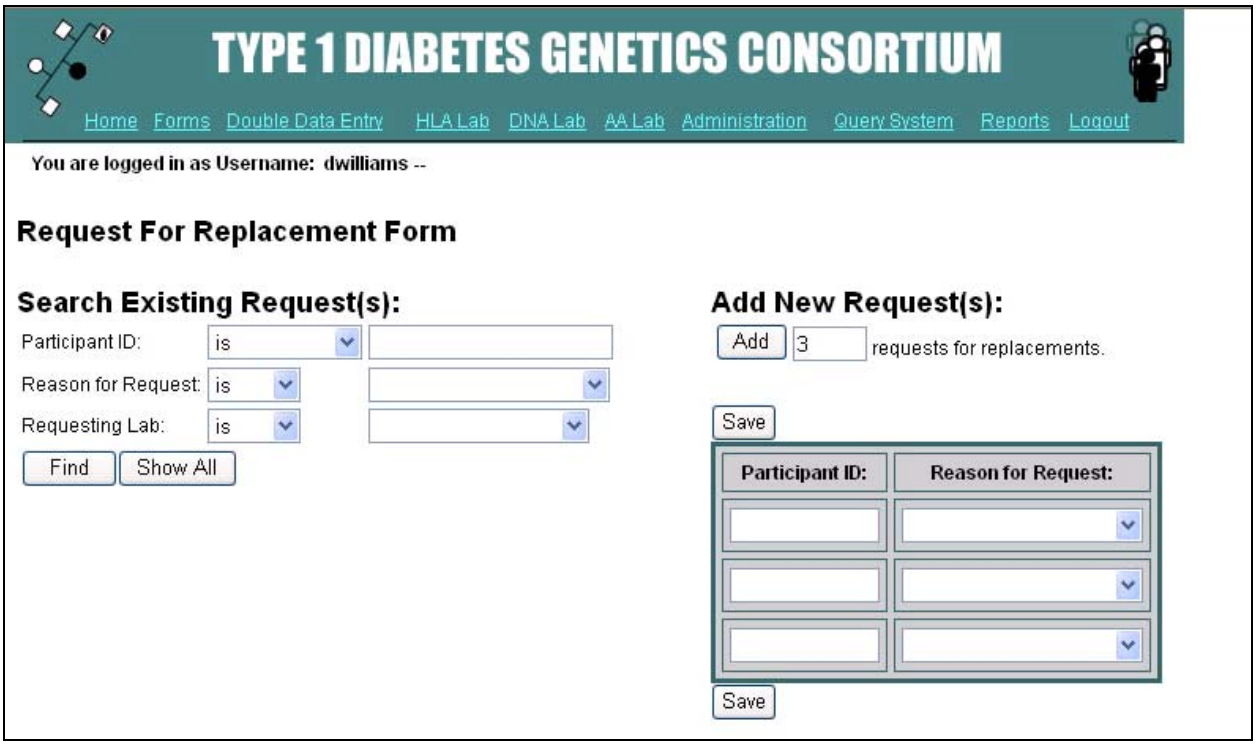


Figure 55. Request a replacement sample (not completed).

c. Scan the participant ID and enter the reason for the request(s) for all rows and press the “Save” button (Figure 56).

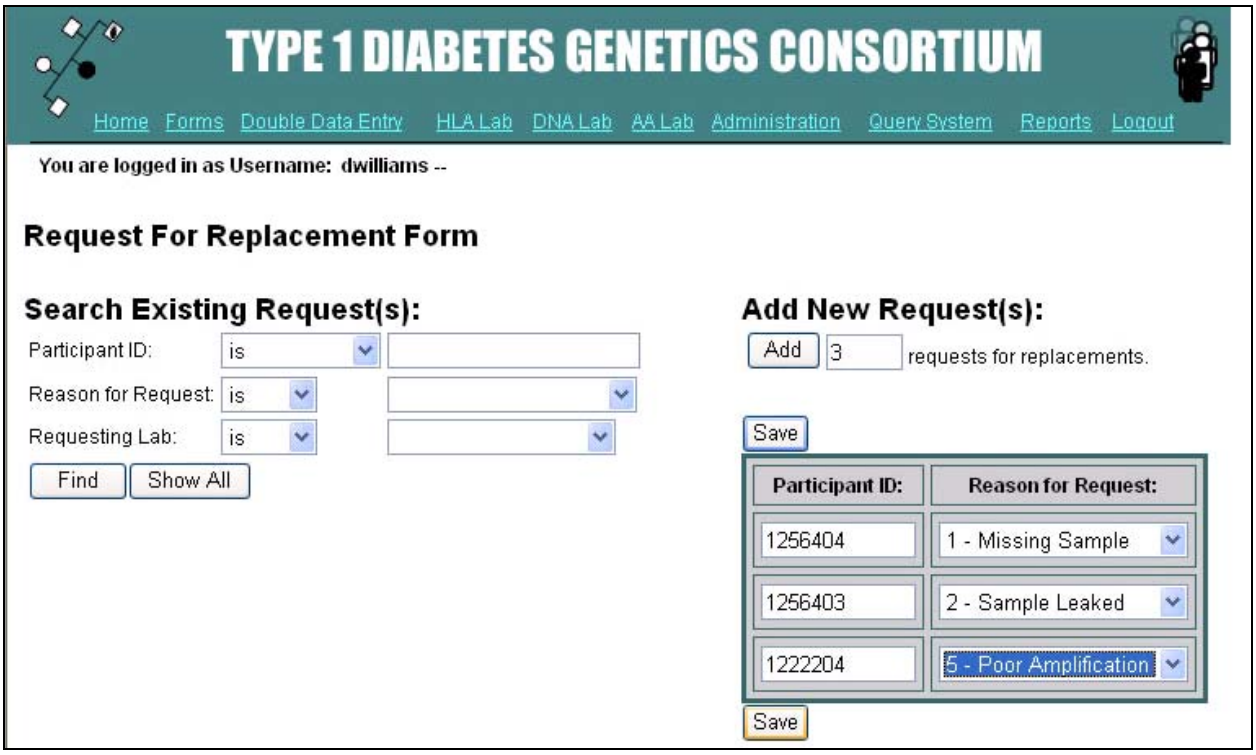


Figure 56. Request a replacement sample (completed).

d. Once the "Save" button has been pressed a confirmation is displayed (Figure 57). An e-mail requesting a replacement sample is sent to the DNA Repository and copied to Joan Hilner, June Pierce, Letitia Perdue, and the requesting HLA Genotyping Laboratory (Figure 58).

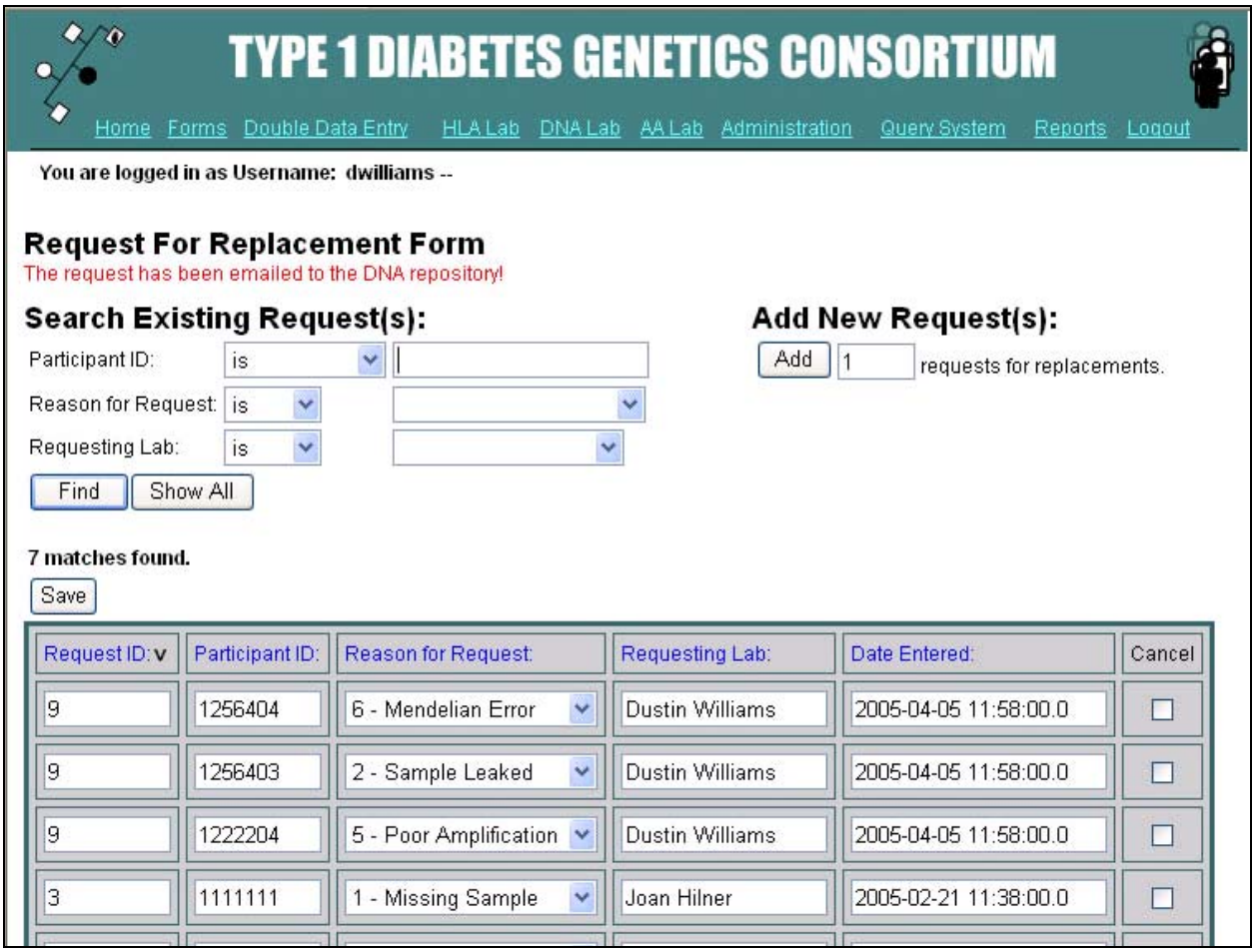


Figure 57. Confirmation of request for replacement sample.

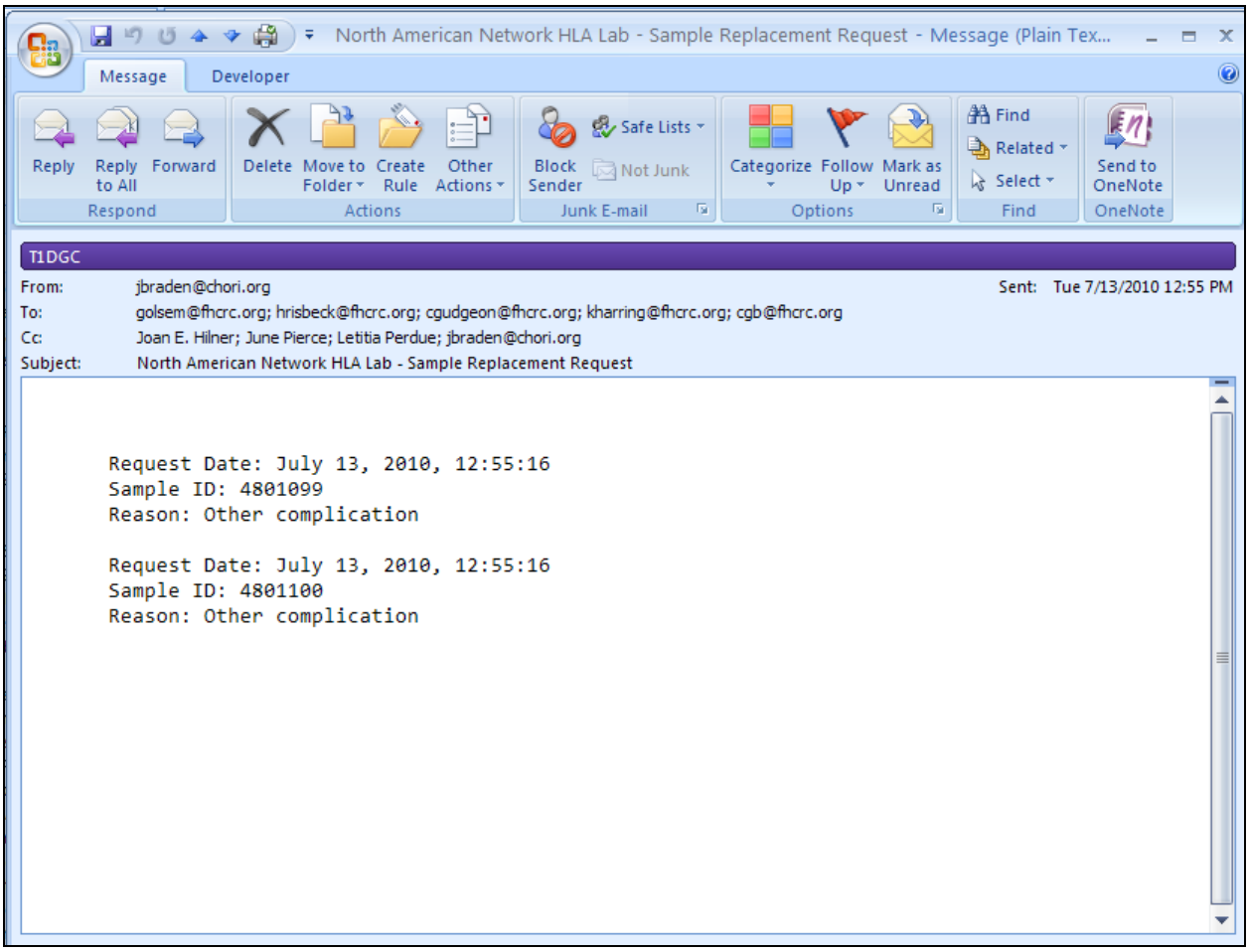


Figure 58. E-mail sent to the DNA Repository requesting a replacement sample.

3. Updating the Request for Replacement Sample.
   a. Once a request has been made, the HLA Genotyping Laboratory user can only modify the reason the request has been made.
   b. Left click in the reason(s) to be updated and change the information in the list of previous requests and press the “Save” button (Figure 59).

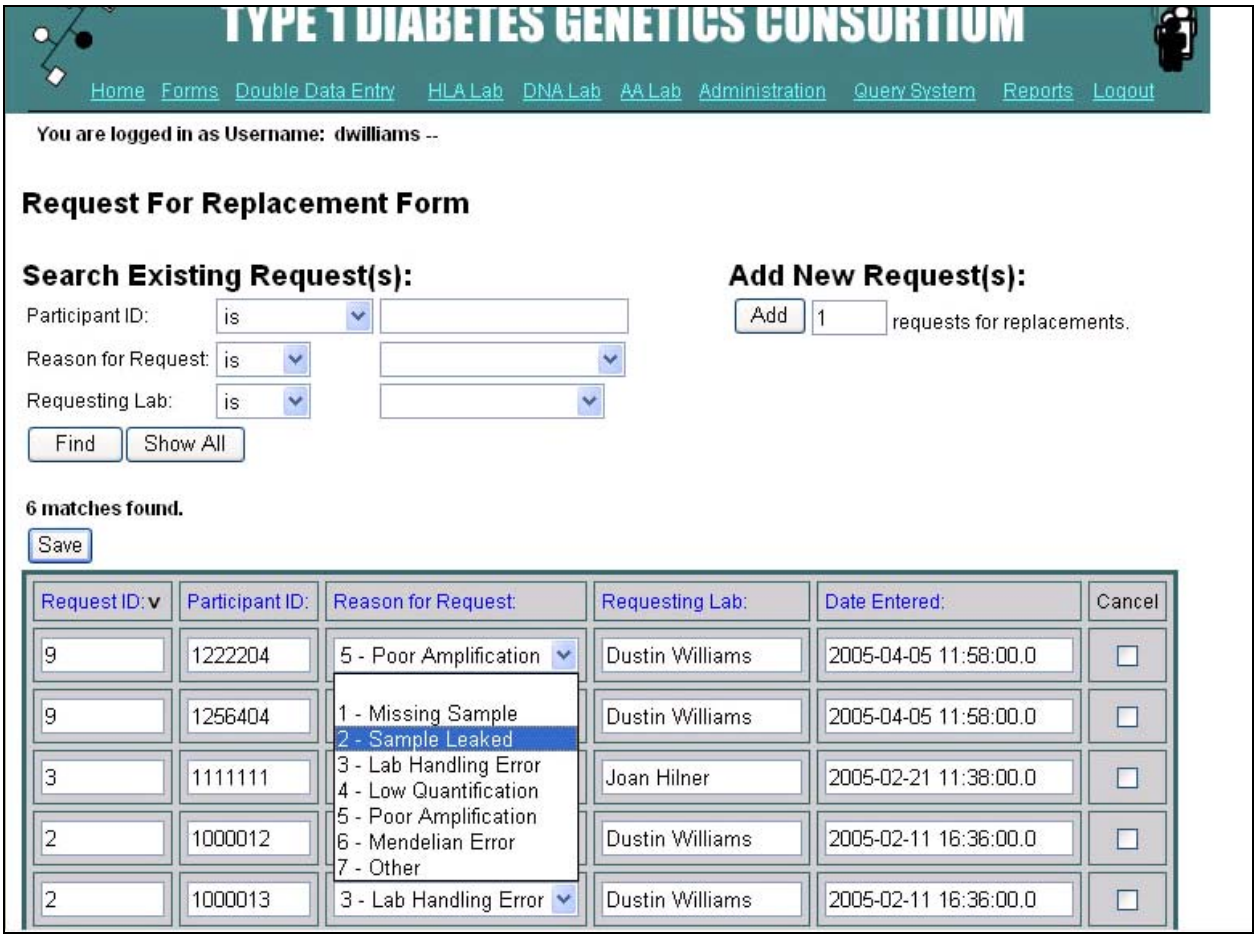


Figure 59. Change the reason for requesting a replacement sample.

c. Once the "Save" button has been pressed a confirmation is displayed (Figure 60). An e-mail indicating an updated reason for requesting a sample is sent to Joan Hilner, June Pierce, Letitia Perdue, and copied to the requesting HLA Genotyping Laboratory.

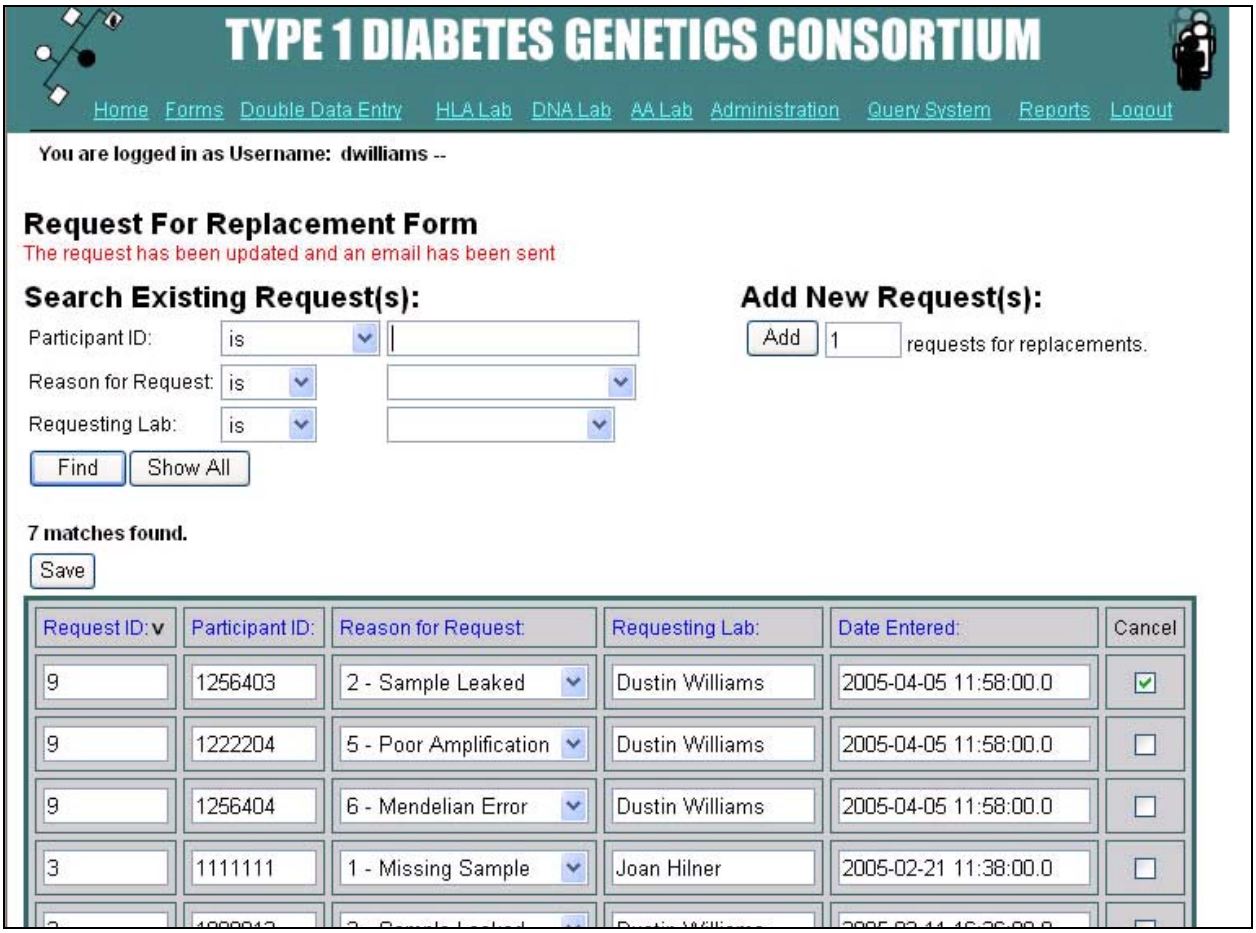


Figure 60. Confirmation of updating reason for request.

4. Canceling a Request for Replacement Sample

   a. If a request needs to be cancelled, select the checkbox next to the sample ID to be cancelled from the list of previously entered requests and press the “Save” button (Figure 61).

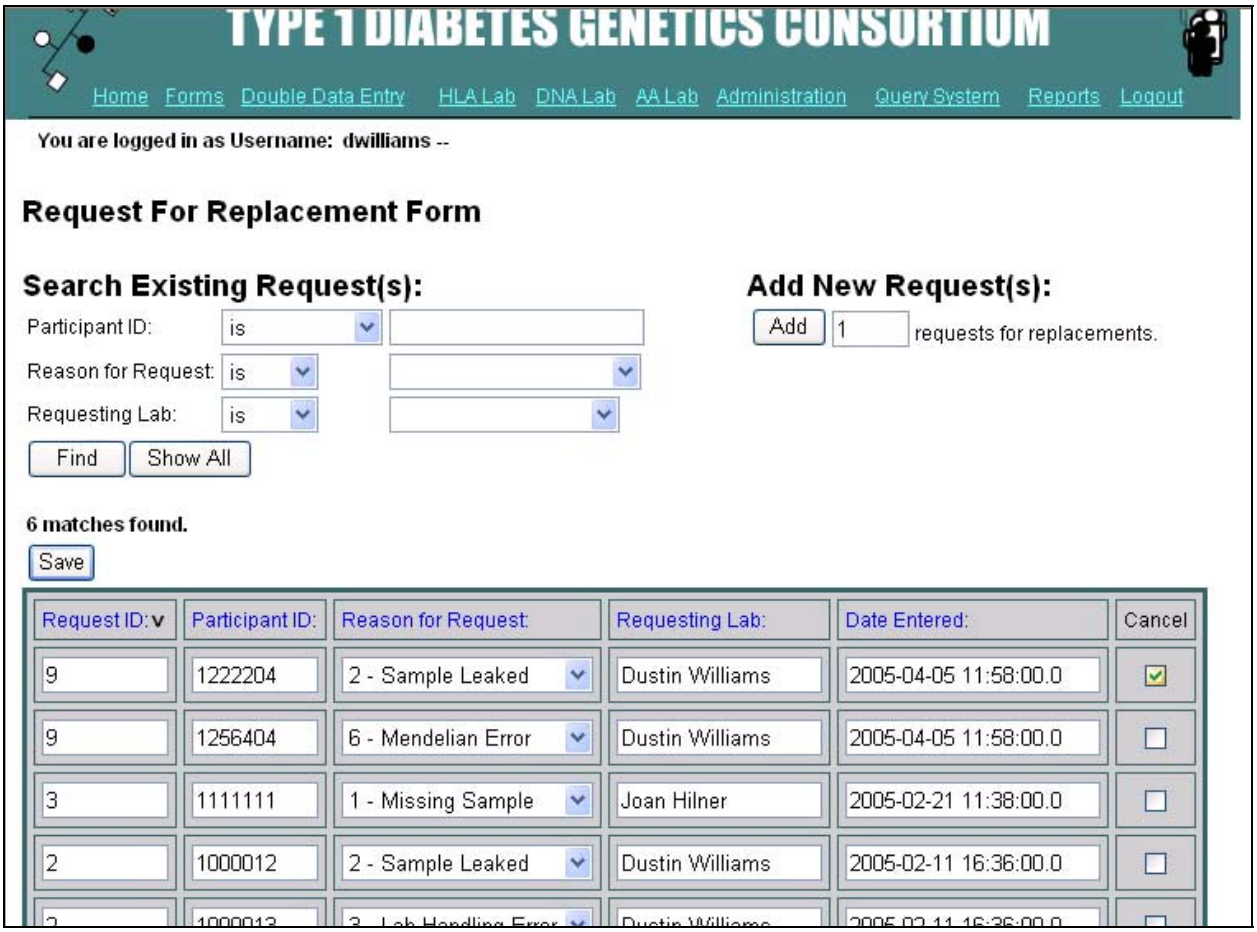


Figure 61. Canceling a request for replacement sample.

b. Once the "Save" button has been pressed a confirmation is displayed (Figure 62). An e-mail canceling the request for the sample is sent to the DNA Repository and copied to Joan Hilner, June Pierce, Letitia Perdue, and the requesting HLA Genotyping Laboratory.

c. If the DNA Repository has already sent the sample, the DNA Repository will "reply to all" on the e-mail stating that the sample has already been sent.

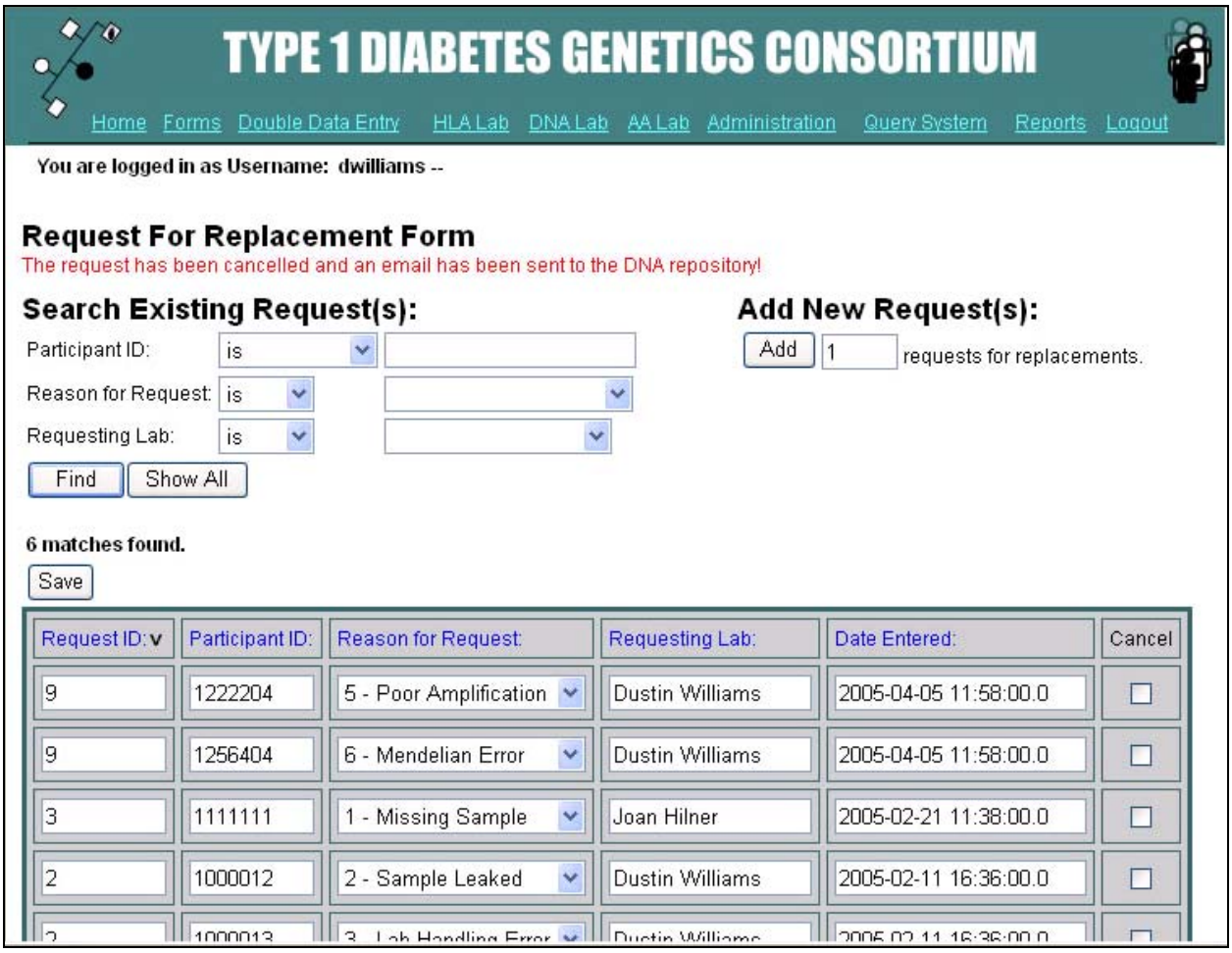


Figure 62. Confirmation of canceling a request for replacement.

5. Searching within the Request for Replacement Form.

To search for an existing participant ID in the system, the HLA Genotyping Laboratory user enters specific search criteria and clicks “Find”. The HLA Genotyping Laboratory user can search by: (1) participant ID; (2) reason for request; or (3) the requesting laboratory.

If searching by participant ID, the HLA Genotyping Laboratory user enters the participant ID and selects one of the following options: “is”, “is not”, “greater than” or “smaller than”. If searching by reason for request or requesting laboratory, the HLA Genotyping Laboratory user selects a reason or laboratory from the drop down menu and selects “is” or “is not”. The HLA Genotyping Laboratory user can view all

participant IDs for whom a replacement sample has been requested by clicking “Show All”.

The HLA Genotyping Laboratory user can also sort all requests by clicking on “Request ID,” “ Participant ID,” “Reason for Request,” “Requesting Laboratory,” or “Date Entered.” The system default is set to sorts the requests by “Request ID.”

Y. HLA StripScan File Upload

1. The HLA StripScan File Upload is used to upload the **images and meta data files from StripScan.**

2. When the HLA Genotyping Laboratory user accesses this link, a page is displayed with a form on the left side of the screen and list on the right side of the screen (Figure 63).

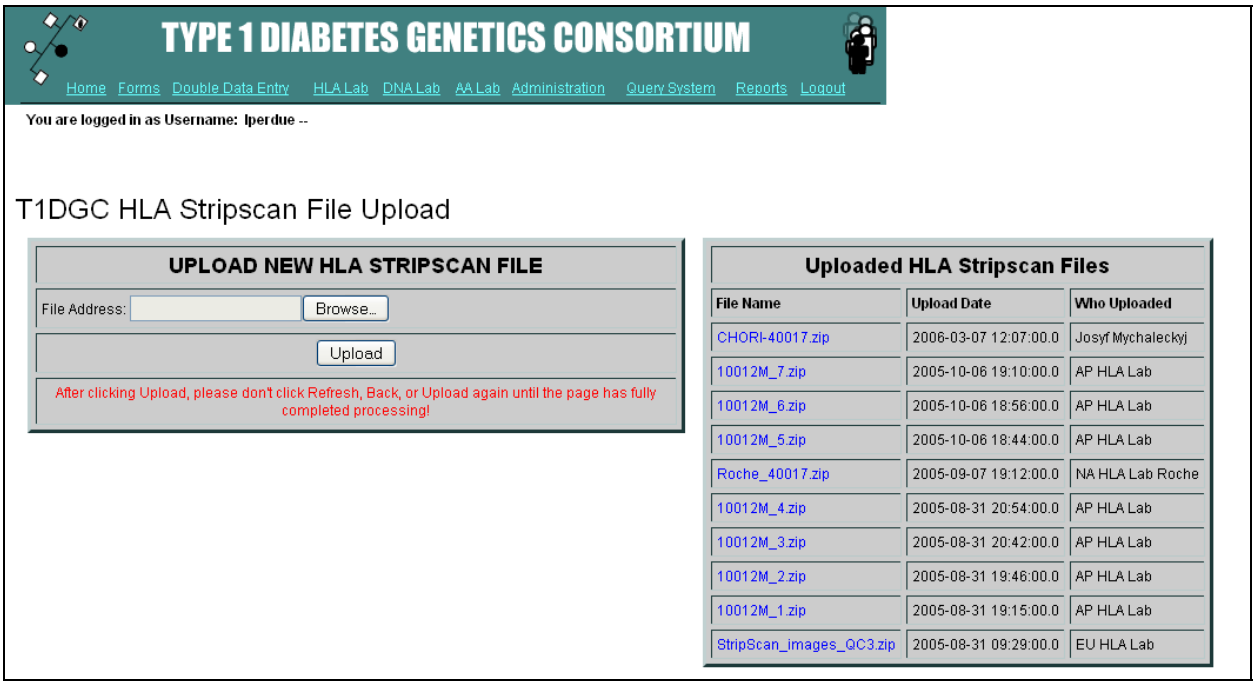


Figure 63. StripScan file upload form.

3. The files listed on the right are files previously uploaded by the HLA Genotyping Laboratory user’s network.

4. The form on the left is used to upload new files.

   a. To upload a file, click “Browse” to locate the file on the computer. Click “Open” or double click on the file to submit the file address.

   b. The file will upload and appear on the uploaded file list (on the right hand side of the screen) as the last uploaded file (Figure 64).

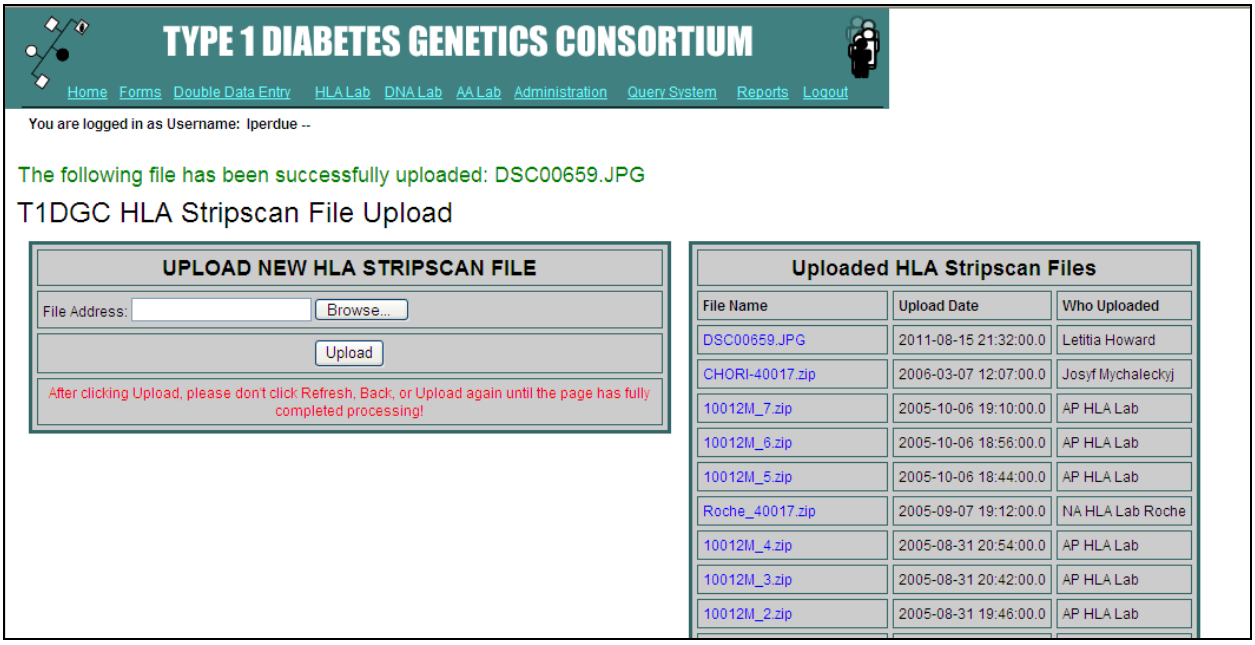


Figure 64. StripScan file upload form confirmation.

Z. Logout

1. HLA Genotyping Laboratory users should “Logout” when not using the system.

2. The system will automatically log out a HLA Genotyping Laboratory user when there has been one hour of inactivity.