REDS-II

DONATION DATABASE OPERATIONS MANUAL

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A well-developed blood donation database is an important tool for helping ensure the safety and adequacy of the blood supply, providing a mechanism to research key issues addressing blood banking. The donor/donation data can be used for a variety of research purposes such as to derive prevalence and incidence estimates of infectious disease (e.g. HIV, hepatitis), develop estimates of the risk of disease transmission, and evaluate the impact of changing screening methodology and test performance. Coupled with demographic information, an invaluable monitoring system that provides quick and accurate data is formed. Additionally, the REDS-II donor/donation database can be used as a sampling frame for multiple types of REDS-II protocols. To this end, the collection of selected data on donors from all REDS-II Blood Centers and its compilation by the Coordinating Center (CC) into a central database is a major component of the REDS program and a contract deliverable for each center.

I. DATA FILES TO BE DELIVERED

Each REDS-II blood center provides the CC with up to five comma delimited files on a monthly basis: 1) the monthly donation data extract file; 2) the monthly short form data file; 3) the supplemental test result data file; 4) the deferral data file; and 5) the reactive test count file. The reactive test count file should include, for the donations included in the donation data file, the number of tests that were reactive for each of the routine screening tests (HIV-antibody, HCV-antibody, HIV-NAT/HCV-NAT/multiplex NAT, HTLV-antibody, HBsAg, anti-HBc, Chagas and WNV-NAT). The blood centers transmit these files each month by secure web transfer (see Section II) and are also asked to indicate on the website (as they transmit each file) the following information:

- blood center code
- type of data file being submitted (donation data extract, supplemental, etc.)
- number of records
- a flag to indicate whether this is a new data file or a replacement data file
- month of data (this should also be reflected in the file name)
- year of data (this should also be reflected in the file name)

Appendix A provides the file structure for the donation, short form, supplemental, and deferral databases. The tables include all of the variables and associated formats.

The monthly comma delimited files should follow the standardized naming convention listed below:

XXXyrmoq.csv

> **XXX** is the center code:
> BCP = Blood Centers of the Pacific/BSRI/UCSF
> BCW = Blood Center of Wisconsin
> EARC = Emory University/Southern Region, American Red Cross
> HOXUC = Hoxworth/University of Cincinnati Medical Center
> ITXM = Institute for Transfusion Medicine/LifeSource Blood Services
> NEARC = New England Region, American Red Cross

> **mo** is the 2 digit month, e.g. 07 if the file contains July data

> **yr** is the 4 digit year, e.g. 2006

> **q** is the type of file, where x=extract, s=supplemental test results, d=deferral, f=short form.

DATA EXTRACT FILE DELIVERY

A secure transfer web site for REDS-II has been developed for blood centers to transfer their data files using a web browser. The site features user authentication based on accounts and passwords and the use of SSL to encrypt the data transmission stream. The Secure Transfer Web Site requires only a browser. No special software or configuration changes are required.

It should be noted that the security of this site is of utmost importance to the CC. Westat operates web servers, database servers, and other specialized application servers for hosting project-related web sites and other Internet supported services. Server configuration consists of various security zones as well as firewall protection to provide access to web applications while protecting the confidentiality and integrity of the data and other internal platforms.

A web server allows access from most Internet locations for Hypertext Transfer Protocol (HTTP) or File Transfer Protocol (FTP) access. The production Web server is installed on this zone and includes security features at the server and application level to prevent unauthorized access. REDS-II data transfer is supported by the Secure Socket Layer (SSL), a secure version of HTTP that encrypts data upon transmission. Confidential data are then stored on a secure data server. Direct access to this zone is restricted to specific Westat data management staff.

In addition to the protections described above, Westat manages the configuration of web-support platforms to further protect the REDS-II data from unauthorized access. FTP access to the REDS-II web server is allowed only from a limited number of pre-defined, internal Internet Protocol (IP) addresses of REDS-II programmers who have undergone the required Federal background check to access data for REDS-II.

Using the REDS-II Data Transfer Web Site

1) The CC has assigned a User ID and password to each blood center. Using an internet browser like Internet Explorer, the blood centers can access the REDS-II website entering their unique user id and password to enter the data transfer screen (Figure 5.1).

Figure 5.1 Data Transfer Site Log-In Screen
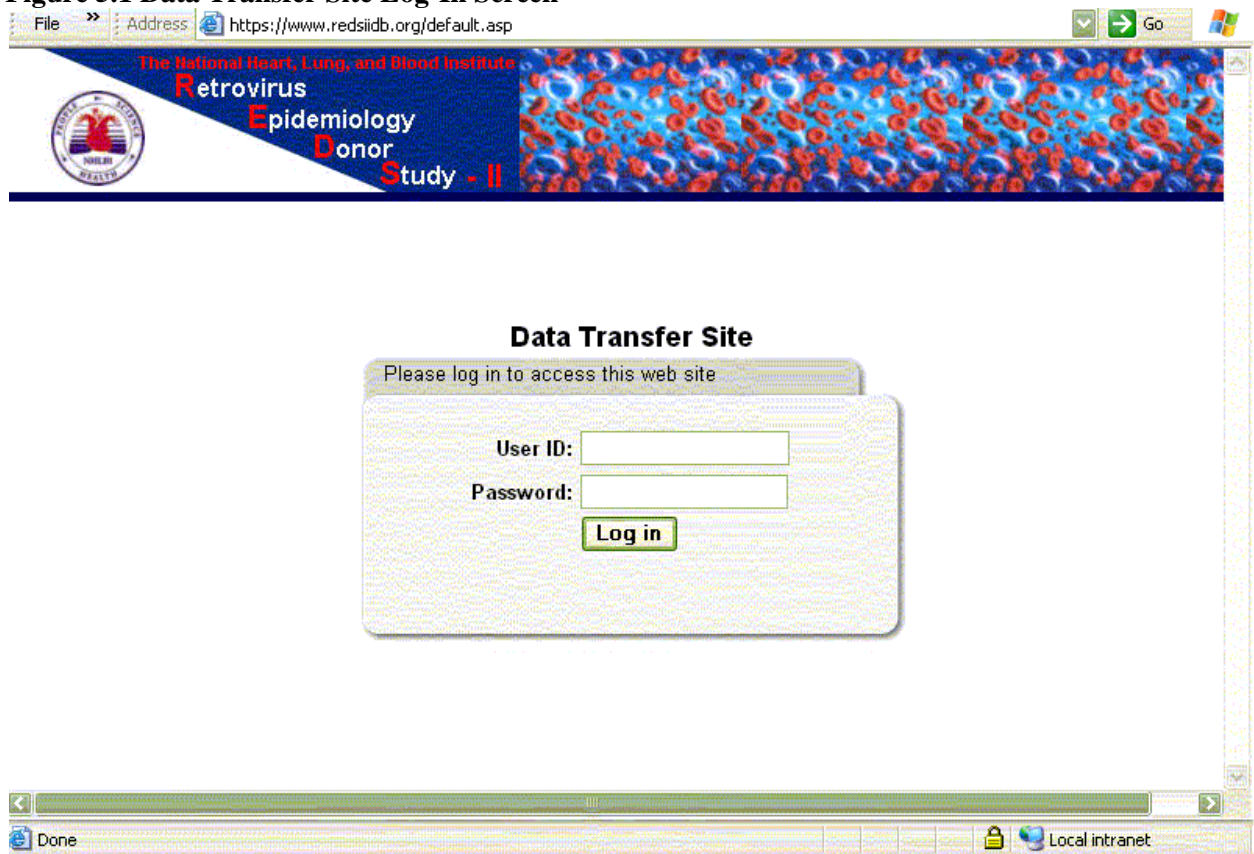
2) The data transfer screen (see Figure 5.2) will ask the blood center to enter the following information for each data file:

*   Blood center code which will be validated against the blood center login
    (21=Blood Center of Wisconsin, 22=Blood Centers of the Pacific/University of California, San Francisco, 23=Emory University/Southern Region, American Red Cross Blood Services, 24=Hoxworth Blood Center/University of Cincinnati Medical Center, 25=Institute for Transfusion Medicine/LifeSource Blood Services, 26=New England Region, American Red Cross Blood Services)

*   Type of Data (x=Donation data extract file, f=Short form data file, s=Supplemental test result data file, d=Deferral data file, and r=Reactive count file)

*   Number of records

*   Whether this is a new set of data or a replacement set

*   Month of data

*   Year of data

Figure 5.2 Data Transfer Screen

3) The blood center will browse their computer for the appropriate file to send once selected, click the **Upload** button to send the file by secure web transfer to Westat's web server.

4) Once the data are received at Westat, initial QC is performed immediately on the data. The initial QC is based on what was filled out on the Data Transfer screen and what is contained in the data file. This includes:

- Appropriate naming convention for file (see Section I)
- Checking that the number of rows in the data matches the number of records entered on the transfer screen
- Number of columns is accurate according to type of data
- Blood center code in the file name is accurate
- Year in the file name is accurate
- Month in the file name is accurate

If there are any mismatches in the data transfer QC process, a message will be sent back to the blood center asking them to verify the content of their data files and/or the information filled in on the transfer screen and resend the dataset once all issues are resolved. Once the data are successfully transferred, a more extensive set of edits, range checks and cross file reconciliation will occur.

II. DONATION DATABASE QUALITY CONTROL PROCESS

Immediate Transmission Verification

At the time of data transmission, the information entered in the data transfer screen will be compared with the content of each file sent. Following the initial QC, a message may be automatically generated if problems are found. Messages may indicate that either 1) the number of records (rows) in the file does not match the number of records as indicated on the data transfer screen and/or 2) the number of columns (specific to center and type of data file) is not as expected and/or 3) the month and year in the name of the data file do not match the month and year entered on the transfer screen. Receipt of one of these messages means that the data file was not accepted by the CC. Thus, a blood center must verify the content of their data files and/or the information provided on the transfer screen and re-submit a data file as soon as possible after resolving the issue(s).

Quality Control (QC) Monthly Edit Report

The entire monthly quality control process starts at the point of successful monthly data transmission to Westat and ends when all critical data issues have been resolved. The QC process is comprised of two parts: 1) checking data elements in each data file separately and 2) identifying discrepancies between files by running a series of checks when compiling the files to form the cumulative donation and deferral databases. Information on the donation data extract files, the corresponding supplemental test result files, and the short form files will be compiled to form the cumulative donation database. Similarly, information on the deferral files and the short form files will be compiled to form the cumulative deferral database.

Quality Control (QC) monthly edit reports are generated on datasets that pass the "immediate transmission verification" check and sent to each blood center via email within **a week** of receiving all five monthly data files from the center. If no data issues are identified, an email is sent confirming that the CC received the data and that no data issues were identified. If data issues are identified, the emailed QC report will include two categories of data issues:

♦ **Data collection issues requiring action ("Quality Control Report"):** Items listed on this report requires that the blood center address the issue identified and respond to the CC. An example of such a response would be for the blood center to send a replacement data file after "fixing" an error and/or for the blood center to address how they will deal with a data issue that cannot be readily fixed.

  - If the data issue(s) can be readily fixed, the blood centers should provide a replacement data file within **2 weeks** of identification of the issue to replace the previous data file. The CC will then repeat the QC process on the replacement data file.

  - If the data issue cannot be fixed, the center needs to specify within **2 weeks** the steps taken so that such an issue will not likely recur; for example, this may entail training/re-training of the staff. The blood center would not be expected to provide a replacement file if the data issue cannot be fixed for that month.

  It is expected that 1) the large majority of files submitted will pass the QC process without being flagged as having data issues requiring action and 2) the few times issues requiring action are identified, the second data file provided will be free of issues. In the event of a recurring problem, the CC will not conduct the QC process more than three times and will compile in the REDS-II database information from the last data file received even if data issues have not been successfully addressed. The donation records with the problematic data elements will be flagged in the REDS-II donation database to allow for either their inclusion or removal when analyses are performed. Further, every 3 months, the Steering Committee will be provided with a summary QC report that lists the number of QC processes that were required per data file per month per center and identifies the data elements with issues to allow for discussion on how multiple failures in the QC process can be resolved (using the experience from centers that do not appear to encounter similar issues).

♦ **Data collection issues that do not <u>require</u> a response from the blood center ("Discrepancy Awareness Report"):** A list of the data issues that do not require a response will alert the blood center of potential issues that they may want to address at its discretion. Blood centers may choose to submit a revised data file if the discrepancies are judged important and can be fixed.

Figure 5.3 illustrates the progression of the quality control process from the point at which the data has been received at the CC.

Figure 5.3: Data Quality Control Overview
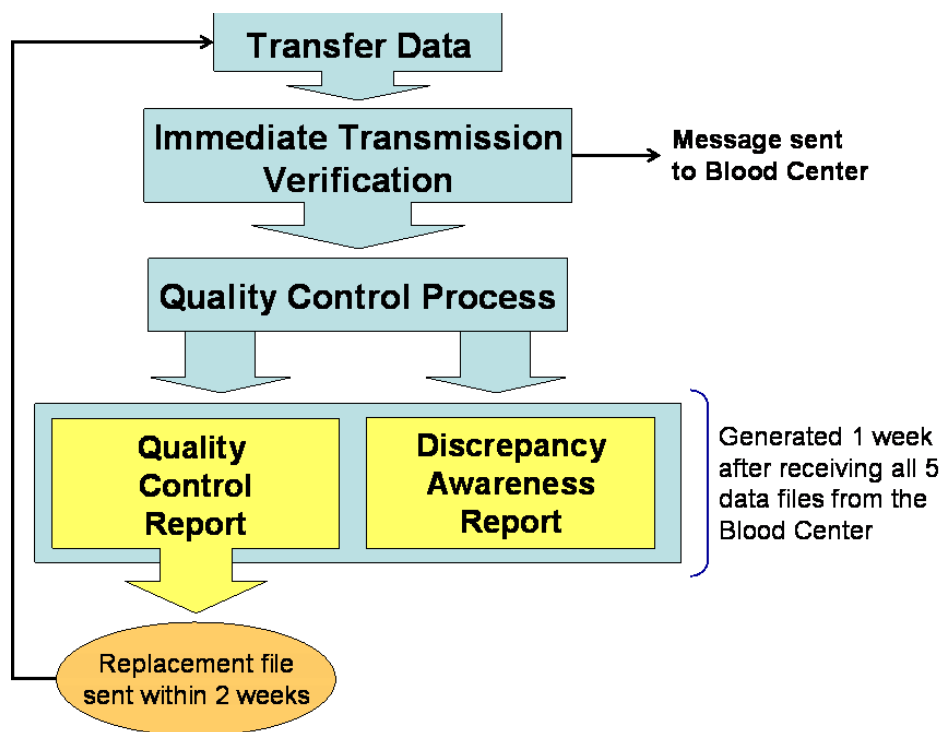
III. SHORT FORM SCANNING PROCESS AND QUALITY ASSURANCE

The monthly short form data file provides self-reported demographic information including transfusion and pregnancy history information. At the start of the REDS-II project, two REDS-II blood centers routinely captured these data as part of the donor enrollment process. Four other centers required a separate form to collect these self-reported values using optical scanning technology. The CC provided short form scanning services to two of these centers at the beginning of the project. By 2007, three centers collected the short form data through blood center enrollment forms and three centers continued to use a separate, opt scan form. At that time, the CC arranged for an outside vendor (Images To Data (ITD)) to scan short forms for the three blood centers.

The process of scanning short form has three stages, briefly described below.

PHASE 1: Review, batch and send collected forms

Each day of collection should be kept together in batches with a cover sheet identifying the date of collection. Once created, the batches are sent to ITD. Prior to shipment, blood centers must check and resolve obvious errors on the form. Specifically, erroneous marks such as double bubbled and incomplete fill-ins should be resolved. Correcting errors early improves the quality of the scanning process. Barcode labels MUST be placed on the short form as straight as possible to avoid errors. Avoid stapling or folding your OpScan forms. Short forms with tears and creases do not scan.

PHASE 2: Scan short-forms and QC converted data

Batched forms are scanned within 1-2 days of arriving at ITD. The resulting data file is checked for errors including partial fills, double bubbles, and missing values. ITD will keep the original short-forms in a secure area. Forms will be destroyed after a specific time has elapsed. ITD converts the data into a comma delimited file that follows the REDS-II codebook.

PHASE 3: Send monthly electronic file to the Blood Center for submission

ITD compiles a calendar month of scanned data and generates a summary of the errors from scanning. This data file and images of the scanned short forms are sent to the blood center on a CD. After receiving and reconciling the scanned data, the blood center submits the short form data extract files to the CC.

Appendix A: Monthly Donation Data Files
Donation Data Extract Variables

Variable Name	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
DONORID	DONOR ID	N	10	
DONYR	YEAR OF DONATION	A	4	2004-2009
DONMO	MONTH OF DONATION	A	2	01-12
DONDA	DAY OF DONATION	A	2	01-31
BLOODID	BLOOD UNIT IDENTIFIER / WHOLE BLOOD NUMBER	A	15	
BIRTHYR	YEAR OF BIRTH	A	4	1910-(current year - 16); except 1900-current year for autologous
BIRTHMO	MONTH OF BIRTH	A	2	01-12
BIRTHDA	DAY OF BIRTH	A	2	01-31
SEX	SEX OF DONOR	A	1	M,F,7,9
BCRACETH	RACE/ETHNICITY OF DONOR (FROM BLOOD CENTER DONOR REGISTRATION FORM)	A	1	A,B,H,I,O,W,M,7,8,9
ZIP	ZIP CODE OF DONOR	A	5	00001-99997
PREVSCRNHX	PREVIOUS SCREENING HISTORY	A	1	N,T,B,7,8,9
PREVYR	YEAR OF LAST (PREVIOUS) DONATION	A	4	1950-2009,9999
PREVMO	MONTH OF LAST (PREVIOUS) DONATION	A	2	01-12,99
PREVDA	DAY OF LAST (PREVIOUS) DONATION	A	2	01-31,99
FIXED	FIXED DONATION SITE OR MOBILE	A	1	F,M,9
DRIVEID	DRIVE ID - THE UNIQUE CODE ASSIGNED TO EACH DRIVE - AT THIS PLACE ON THIS DAY	A	11	
SITE	SITE OF DRIVE - CODE FOR LOCATION ASSOCIATED WITH THIS DRIVE - CONSISTENT OVER TIME	A	10	
SPONSOR	SPONSOR OF DRIVE - CODE FOR ORGANIZATION ASSOCIATED WITH THIS DRIVE	A	10	
SPONSORTYPE	SPONSOR GROUP TYPE	A	3	CHU, CIV, COL, COR, HEA, HS, IND, SER, MIL, FIX, 999
DONTYPE	DONATION TYPE	A	1	H, A, D, T, R, L, O, 9

Appendix A: Monthly Donation Data Files
Donation Data Extract Variables

Variable Name	Variable Description	Type	Length	Values
DONPROC	DONATION PROCEDURE - RECOMMENDED CODES	A	2	WB,SO,PP,LP,PL,P2,P3,P4,P5, R2,SC,OT,99
REACTION	REACTION CODE USED AT BLOOD CENTER	A	1	
OUTCOME	OUTCOME OF DONATION PROCEDURE	A	1	S,Q,O,9
ABO_RH	BLOOD TYPE OF DONOR	A	3	O+, A+, B+, AB+, O-, A-, B-, AB-, UNT
CMV	CYTOMEGALOVIRUS ANTIBODY TEST RESULT	A	2	NR,NT,R
HBCAB	HEPATITIS B CORE ANTIBODY SCREENING TEST RESULT	A	2	NR,NT,R
HBSAG	HEPATITIS B SURFACE ANTIGEN SCREENING TEST RESULT	A	2	NR,NT,R
HCV	HEPATITIS C ANTIBODY SCREENING TEST RESULT	A	2	NR,NT,R
HIV	HIV 1/2 ANTIBODY SCREENING TEST RESULT	A	2	NR,NT,R
HIV2	HIV 2 ANTIBODY SCREENING TEST RESULT	A	2	NR,NT,R
HTLV	HTLV I/II ANTIBODY SCREENING TEST RESULT	A	2	NR,NT,R
SYP	SYPHILIS SCREENING TEST RESULT	A	2	NR,NT,R
MPXNAT2	MULTIPLEX NAT SCREENING TEST - HIV AND HCV	A	2	NR,NT,R
MPXNAT3	MULTIPLEX NAT SCREENING TEST - HIV AND HCV AND HBV	A	2	NR,NT,R
WNVNAT	WEST NILE VIRUS NAT SCREENING RESULT	A	2	NR,NT,R
CHAGAS	CHAGAS SCREENING RESULT	A	2	NR,NT,R
HCT_VALUE *	HEMATOCRIT VALUE	N	4.1	21.0-60.0, 99.1, 99.2, 99.9
HB_VALUE *	HEMOGLOBIN VALUE	N	4.1	7.0-21.0, 99.1, 99.2, 99.9

*Additional fields only for non-ARC centers

Appendix A: Monthly Donation Data Files
Short Form Variables

	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
BLOODID	BLOOD UNIT IDENTIFIER / WHOLE BLOOD NUMBER / barcode	A	15	
DONORID	DONOR ID	N	10	
VISITYR	YEAR OF VISIT	A	4	2004-2009
VISITMO	MONTH OF VISIT	A	2	01-12
VISITDA	DAY OF VISIT	A	2	01-31
HEIGHT_FEET	WHAT IS YOUR HEIGHT? EXAMPLE: 5 FEET 10 INCHES. FEET?	N	2	03-07,97,99
HEIGHT_INCHES	WHAT IS YOUR HEIGHT? EXAMPLE: 5 FEET 10 INCHES. INCHES?	N	2	00-11,97,99
WEIGHT	WHAT IS YOUR WEIGHT? EXAMPLE: 152 POUNDS	N	3	070-500,997,999
TRANSFUS	HAVE YOU EVER RECEIVED SOMEONE ELSE'S BLOOD?	A	1	Y,N,7,8,9
TRANSFUS2	IF YES, IN WHAT YEAR DID YOU HAVE YOUR MOST RECENT BLOOD TRANSFUSION?	A	4	1910-2009,9997,9998,9999
COUNTRY	WHAT IS YOUR COUNTRY OF BIRTH?	N	3	060-995,996,997,998,999
EDUCATN	WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED?	A	1	A-F,7,8,9
FTEVER	IS THIS THE FIRST TIME THAT YOU HAVE EVER GIVEN BLOOD?	A	1	Y,N,7,8,9
GENDER	I AM...GENDER	A	1	M,F,7,9
PREGNANT	IF FEMALE, HAVE YOU EVER BEEN PREGNANT?	A	1	Y,N,7,8,9
NUMPREG	IF YES, HOW MANY TIMES?	N	2	0,1-6,7,8,9
HISPANIC	ARE YOU OF HISPANIC/ SPANISH ORIGIN?	A	1	Y,N,7,8,9
ETHNICITY	IF YES, WHAT TYPE? (HISPANIC/ SPANISH ORIGIN)	A	1	A-D,0,6,7,8,9
RACE	WHAT IS YOUR RACE? (MARK ONLY ONE)	A	1	W,B,E,H-P,Z,7,8,9
HCT_VALUE *	HEMATOCRIT VALUE	N	4.1	21.0-60.0, 99.1, 99.2, 99.9
HB_VALUE *	HEMOGLOBIN VALUE	N	4.1	7.0-21.0, 99.1, 99.2, 99.9

*Additional fields only for ARC centers

Appendix A: Monthly Donation Data Files
Deferral Variables
(this file structure is used for BCP, BCW and Hoxworth)

Variable Name	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
DONORID	DONOR ID	N	10	
VISITYR	YEAR OF VISIT	A	4	2004-2009
VISITMO	MONTH OF VISIT	A	2	01-12
VISITDA	DAY OF VISIT	A	2	01-31
DEFERRAL_CODE	DEFERRAL CODE USED AT BLOOD CENTER	A	5	
PERMANENT	IS DEFERRAL PERMANENT?	A	1	Y,N,9
DEFERRAL_LENGTH	LENGTH OF DEFERRAL IN DAYS	N	4	0001-1826,9998,9999
EFFECTIVE_YR	YEAR DEFERRAL BECAME EFFECTIVE	A	4	2004-2009,9999
EFFECTIVE_MO	MONTH DEFERRAL BECAME EFFECTIVE	A	2	01-12,99
EFFECTIVE_DA	DAY DEFERRAL BECAME EFFECTIVE	A	2	01-31,99
ELIGIBILITY_YR	YEAR DONOR ELIGIBLE TO DONATE AGAIN	A	4	2004-2009,9999
ELIGIBILITY_MO	MONTH DONOR ELIGIBLE TO DONATE AGAIN	A	2	01-12,99
ELIGIBILITY_DA	DAY DONOR ELIGIBLE TO DONATE AGAIN	A	2	01-31,99
DEFERRALID*	DEFERRAL VISIT ID - FOR LINK TO SHORT FORM	N		
HCT_VALUE **	HEMATOCRIT VALUE	N	4.1	21.0-60.0, 99.1, 99.2, 99.9
HB_VALUE **	HEMOGLOBIN VALUE	N	4.1	7.0-21.0, 99.1, 99.2, 99.9

* This field only applies to BCW
**Additional fields only for non-ARC centers

Appendix A: Monthly Donation Data Files
Deferral Variables
(this file structure is used for ITxM, NEARC and SEARC)

Variable Name	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
DONORID	DONOR ID	N	10	
VISITYR	YEAR OF VISIT	A	4	2004-2009
VISITMO	MONTH OF VISIT	A	2	01-12
VISITDA	DAY OF VISIT	A	2	01-31
DEFERRAL_CODE	DEFERRAL CODE USED AT BLOOD CENTER	A	5	
PERMANENT	IS DEFERRAL PERMANENT?	A	1	Y,N,9
DEFERRAL_LENGTH	LENGTH OF DEFERRAL IN DAYS	N	4	0001-1826,9998,9999
EFFECTIVE_YR	YEAR DEFERRAL BECAME EFFECTIVE	A	4	2004-2009,9999
EFFECTIVE_MO	MONTH DEFERRAL BECAME EFFECTIVE	A	2	01-12,99
EFFECTIVE_DA	DAY DEFERRAL BECAME EFFECTIVE	A	2	01-31,99
ELIGIBILITY_YR	YEAR DONOR ELIGIBLE TO DONATE AGAIN	A	4	2004-2009,9999
ELIGIBILITY_MO	MONTH DONOR ELIGIBLE TO DONATE AGAIN	A	2	01-12,99
ELIGIBILITY_DA	DAY DONOR ELIGIBLE TO DONATE AGAIN	A	2	01-31,99
BIRTHYR	YEAR OF BIRTH	A	4	1910-(current year - 16); except 1900-current year for autologous
BIRTHMO	MONTH OF BIRTH	A	2	01-12
BIRTHDA	DAY OF BIRTH	A	2	01-31
ABO_RH	BLOOD TYPE OF DONOR	A	3	O+, A+, B+, AB+, O-, A-, B-, AB-, UNT
BCRACETH	RACE/ETHNICITY OF DONOR (FROM BLOOD CENTER DONOR REGISTRATION FORM)	A	1	A,B,H,I,O,W,M,7,8,9
SEX	SEX OF DONOR	A	1	M,F,7,9
ZIP	ZIP CODE OF DONOR	A	5	00001-99997
FIXED	FIXED DONATION SITE OR MOBILE	A	1	F,M,9
DRIVEID	DRIVE ID - THE UNIQUE CODE ASSIGNED TO EACH DRIVE - AT THIS PLACE ON THIS DAY	A	11	
SITE	SITE OF DRIVE - CODE FOR LOCATION ASSOCIATED WITH THIS DRIVE - CONSISTENT OVER TIME	A	10	
SPONSOR	SPONSOR OF DRIVE - CODE FOR ORGANIZATION ASSOCIATED WITH THIS DRIVE	A	10	
SPONSORTYPE	SPONSOR GROUP TYPE	A	3	CHU, CIV, COL, COR, HEA, HS, IND, SER, MIL, FIX, 999

Appendix A: Monthly Donation Data Files
Supplemental Testing

Variable Name	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
DONYR	YEAR OF DONATION	A	4	2004-2009
DONMO	MONTH OF DONATION	A	2	01-12
DONDA	DAY OF DONATION	A	2	01-31
BLOODID	BLOOD UNIT IDENTIFIER / WHOLE BLOOD NUMBER	A	15	
HBVNAT	HBV NAT RESULT	A	2	NR,NT,R
HCVNAT	HCV NAT RESULT	A	2	NR,NT,R
HIVNAT	HIV NAT RESULT	A	2	NR,NT,R
HBSAGF	HEPATITIS B SURFACE ANTIGEN CONFIRMATORY RESULT (NEUTRALIZATION?)	A	2	NR,NT,PO,NE,IV
HCVF	HEPATITIS C ANTIBODY CONFIRMATORY RESULT (RIBA?)	A	2	NR,NT,PO,NE,IN
HIV1F	HIV - 1 ANTIBODY CONFIRMATORY RESULT	A	2	NR,NT,PO,NE,IN
HIV2F	HIV - 2 ANTIBODY CONFIRMATORY RESULT	A	2	NR,NT,PO,NE,IN
HTLVF	HTLV I/II ANTIBODY CONFIRMATORY RESULT	A	3	NR,NT,PO1,PO2,PO,NE,IN
SYPF	SYPHILIS CONFIRMATORY RESULT	A	2	NR,NT,PO,NE,IN
WNVF	WEST NILE VIRUS CONFIRMATORY RESULT	A	2	NR,NT,PO,NE,IN
CHAGASF	CHAGAS CONFIRMATORY RESULT	A	2	NR,NT,PO,NE,IN

Appendix A: Monthly Donation Data Files
Reactive Test Counts

Variable Name	Variable Description	Type	Length	Values
CENTERID	BLOOD CENTER ID	A	2	21-26
VISITYR	YEAR OF VISIT	A	4	2004-2009
VISITMO	MONTH OF VISIT	A	2	01-12
CMV	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR CYTOMEGALOVIRUS ANTIBODY	N	4	
HBCAB	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HEPATITIS B CORE ANTIBODY	N	4	
HBSAG	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HEPATITIS B SURFACE ANTIGEN	N	4	
HCV	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HEPATITIS C ANTIBODY	N	4	
HIV	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HIV 1/2 ANTIBODY	N	4	
HIV2	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HIV 2 ANTIBODY	N	4	
HTLV	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR HTLV I/II ANTIBODY	N	4	
SYP	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR SYPHILIS	N	4	

Appendix A: Monthly Donation Data Files
Reactive Test Counts

Variable Name	Variable Description	Type	Length	Values
MPXNAT2	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR MULTIPLEX NAT SCREENING TEST - HIV AND HCV	N	4	
MPXNAT3	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR MULTIPLEX NAT SCREENING TEST – HIV, HCV AND HBV	N	4	
WNVNAT	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR WEST NILE VIRUS NAT	N	4	
CHAGAS	NUMBER OF REACTIVE DONATIONS DURING MONTH FOR CHAGAS	N	4	