



VistA Blood Establishment Computer Software (VBECS) 2.3.3

Release Notes Version 2.0

Department of Veterans Affairs
Enterprise Project Management Office

Revision History

Date	Revision	Description	Author
9/14/21	1.0	VBECS 2.3.3 Rev A Initial version	BBM Team
10/8/21	2.0	VBECS 2.3.3 Rev A. Updated with feedback from IOC TEST	BBM Team

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Introduction

Vista Blood Establishment Computer Software (VBECS) 2.3.3 Release Notes contains information for changes and corrections made to VBECS in the 2.3.3 Rev A patch.

Perform a local evaluation and risk assessment of the changes to determine the requirements for local validation of the changes, including documentation of the assessment activities. See Validation Planning.

Changed Features and Functions

This code patch release is centrally focused around the migration of the VBECS test and production servers from the Austin Information Technology Center (AITC) primary data center and Philadelphia Information Technology Center (PITC) secondary data center to the Azure Veterans Administration Enterprise Cloud (VAEC). In support of this migration, certain infrastructure updates are also being made, such as an upgrade of the Microsoft Windows operating system. Other than the specific defects and requests addressed as listed below, no VBECS functionality has been changed and the system should work in the VAEC cloud as it did previously at AITC/PITC.

Specific changes in this version include:

- Migrated the VBECS test and production servers from AITC/PITC to the Microsoft Azure cloud.
- Upgraded the VBECS application and database server operating system version from Microsoft Windows 2008 Server Enterprise Edition R2 to Microsoft Windows 2016 Server.
- Upgraded the off-the-shelf software tools to new incremental versions (e.g., Microsoft SQL Server 2012 to Microsoft SQL Server 2016 and Microsoft .Net Framework 4.6 to Microsoft .NET Framework 4.8)
- Separated the test and production application servers.
- Allowed for high availability of the production application servers.
- Fixed known defects and requests related to VBECS login with PIV.
- Fixed known defects and requests related to the Unit ID entry throughout VBECS.
- Fixed known defects and requests related to the GUI.

Table 1: Updates by Option provides a complete list of included changes.

Untestable System-Level Maintenance Changes

- Resolved security findings from the Fortify static analysis tool scan (untestable by the user).

Vista Software Dependencies

- VBEC*2*8
- VBEC*2*9 information patch only.

Migration to VAEC Azure Cloud

Installation and migration requires a minimum of several hours of downtime, however, we ask that each site be prepared for a **potential 24-hour downtime** in the event of unexpected problems during the process. Have your downtime procedures ready, make sure that you notify your staff including afternoon and night shifts. All blood bank work done during the migration will need to be recorded offline using downtime protocols and then entered retrospectively into VBECS following a successful migration.

The VBECS team is only capable of performing a limited number of migrations per day. A VBECS team representative will reach out to blood bank supervisors to coordinate a date and time for your installation and migration.

VBECS test environments will be migrated in large batches without the need for blood bank scheduling. The VBECS team will publish a timeline of VBECS Test migrations in a future communication. The migration of your test environment will not impact your ability to use your production VBECS.

Preparing for the Migration

To prepare for your migration, go over this document thoroughly, especially focusing on Table 1: Updates by Option which contains validation scenarios that you will be asked to execute once the migration is over. One of the scenarios requires verification of reports. Make sure that you print or export those reports from your current VBECS 2.3.2 environment before the migration occurs so that you can later compare them against the same reports printed from your new VBECS 2.3.3 environment. If you are exporting reports, save them on your workstation or local network drive. This also applies to any other exported reports that you would like to preserve.

The migration process DOES NOT copy currently exported reports from the AITC VBECS servers. Your existing exported reports hosted at AITC will be unavailable after your production migration completes, so plan accordingly.

Automated Instrument Interface

This section applies only to sites who utilize automated blood bank analyzers that are interfaced with VBECS. Your existing automated instrument interface will have to be reconfigured to point to the new VBECS server in Azure cloud. This change is usually done by LIM who manages your Data Innovations (DI) Instrument Manager server. However, before the interface change can be made an **ACL modification request** must be submitted to your local Biomed to open connectivity between your DI server and VBECS servers in Azure cloud. The ACL modification request might take many days to complete so it is vitally important to submit the change as soon as possible so that it is ready before the migration. Have your LIM contact the BBM team **REDACTED** to request the details of the ACL modification.



If the change is not made in time, you will not be able to send results from your analyzer to VBECS and will be required to enter test results manually into the system.

After the Migration

The VBECS team will provide new Remote Desktop shortcuts: there will be one Remote Desktop shortcut for VBECS test and one for production.

The VBECS team will also provide new shortcuts to exported reports. There will one report share shortcut for VBECS test and one for production.

Copy your blood bank's new shortcuts to all workstations that are used by your staff to connect to VBECS. Making the new shortcuts available for all workstation users may require local/regional IT desktop support. See the *VBECS 2.3.3 Technical Manual-Security Guide* for further details.

After production migration, all old (VBECS 2.3.2) shortcuts will cease to function. After both test and production migration is complete, contact local/regional IT support to have all old shortcuts removed from all workstations.

Once you have a new Remote Desktop shortcut, use it to login to the new VAEC VBECS server and begin the validation process as described in Table 1: Updates by Option.

VBECS team will be in contact with your local LIMs and VistA administrators to ensure the transition of VistA, CPRS and automated instruments (if you are using one) to the new configuration.

User Experience

In general, the VBECS 2.3.3 user experience is very similar to what you are used to with VBECS 2.3.2. The “look and feel” of the new VBECS server operating system is very similar to Windows 10. The VBECS GUI was updated to make sure it works correctly under the new windows operating system (including fixing some typos).

We also improved the login experience which should be noticeably faster. After starting VBECS 2.3.2, PIV users were presented with a certificate list used to establish a VistA connection. In VBECS 2.3.3, VBECS attempts to automatically select a certificate for you, and so you may no longer see a certificate window before being prompted for your PIN.

Reports

The underlying report engine was also upgraded with VBECS 2.3.3 which should result in faster report loading. As a result we are asking you to perform a validation of report functionality to ensure the newer report engine has no negative impact on your report generation (see Table 1: Updates by Option for details).

The system clocks on all new VAEC VBECS servers are set to UTC as opposed to Central Time at AITC. This will affect report scheduling functionality. When you schedule reports and select a time for printing the report in the future, you will now need to calculate your local time offset from UTC rather than Central Time. For example, if you schedule a report for 9:00 AM in 2.3.2, the report would have printed at 9:00 Central Time. Now in 2.3.3 the report will print at 9:00 UTC, which is 4:00 AM Central Time. We plan to simplify this process in a future patch release.

Server Maintenance Changes

Your new VAEC VBECS servers will now be rebooted weekly as part of regular server maintenance which includes the monthly Windows update patching. In addition, these new servers will no longer reboot at a specific time, but instead will reboot during a maintenance window.

Downtime expected during server maintenance:

- VBECS test environments are comprised of a single server, and that server will be unavailable for as long as the server maintenance lasts.
- VBECS production environments are comprised of two servers, which allows one server to be patched and rebooted while users work uninterrupted on the second server. However, when the time comes to patch the second server, users simply sign-out and then sign back in. The new remote desktop shortcuts will automatically route users to the first server. Downtime is expected to be extremely minimal.

Users connected to a server (either test or production) will still receive warning alerts, giving them time to save their work before the reboot.

See the *VBECS 2.3.3 Technical Manual-Security Guide* for the server maintenance schedule.

Printers

As part of the migration process, all of your existing printers from your AITC server will be setup in VAEC (on both your production and test server). Once you have migrated to VAEC, adding a new printer can now be done using VBECS Admin, as long as the printer brand is one of the VBECS supported brands (i.e., HP, Lexmark, Xerox, Samsung). VBECS Admin 2.3.3 has a new *Edit Printers* menu option that allows users to add or remove server printers. Refer to the *VBECS Admin User Guide* for more details on this new feature. You will also be asked to test this new functionality as part of the validation scenarios listed in Table 1: Updates by Option.

If you need to replace or add a new printer in between your test and production migrations, you will need to contact customer support to have your AITC server updated. However, you will be able to update your VAEC test server yourself and update your production VAEC server after your production migration completes.

New User Requirements

Starting with VBECS 2.3.3, all users will require an AES 256 flag enabled on their Active Directory accounts. The VBECS team will ensure that this flag is enabled for all existing users as of VBECS 2.3.3 national release. You will need to ensure this flag is enabled for all new VBECS users. If you have any new user onboarding procedures, modify them to include enabling this flag in addition to adding them to your site's VBECS Active Directory group.

VBECS User Documents

The following is a list of all the VBECS user documents that apply to the VBECS 2.3.3 Rev A patch release. The **Updated** column identifies the documents that have been updated with this VBECS 2.3.3 Rev A patch release.

These user documents are available from the VBECS SharePoint site at **REDACTED**.

User Document	Version	Updated
<i>VBECS 2.3.3 User Guide</i>	1.0	Yes
<i>VBECS 2.3.3 Admin User Guide</i>	1.0	Yes
<i>VBECS 2.3.3 Known Defects and Anomalies</i>	1.0	Yes
<i>VBECS 2.3.3 Technical Manual-Security Guide</i>	2.0	Yes
<i>Vista Blood Establishment Computer Software (VBECS) - Echo Interface Configuration and Setup Guide</i>	5.0	No
<i>Vista Blood Establishment Computer Software (VBECS) - Erytra Interface Configuration and Setup Guide</i>	2.0	No
<i>Vista Blood Establishment Computer Software (VBECS) - ProVue Interface Configuration and Setup Guide</i>	5.0	No
<i>Vista Blood Establishment Computer Software (VBECS) - Vision Interface Configuration and Setup Guide</i>	4.0	No

The following is a list of all the VBECS FAQ documents that apply to the VBECS 2.3.3 Rev A patch release. The **Updated** column identifies the documents that have been updated with this VBECS 2.3.3 Rev A patch release.

These FAQ documents are available from the VA SharePoint site at **REDACTED**.

FAQ Document	Version	Updated
<i>FAQ ABO subgroup Interpretations</i>	11/22/16	No
<i>FAQ Ancillary VistA Validation</i>	11/28/17	No
<i>FAQ Antibodies with No Antigen Negative Requirement</i>	10/15/14	No
<i>FAQ Blood Product Table Processes</i>	03/28/19	No
<i>FAQ CAP Comprehensive Transfusions Medicine Crossmatch Survey</i>	11/22/16	No
<i>FAQ Compound Antibodies</i>	02/27/13	No
<i>FAQ CPRS VBECS Order Details</i>	04/01/09	No
<i>FAQ Database Conversion Oddballs</i>	09/15/09	No
<i>FAQ Documenting Unhandled Exceptions</i>	05/21/07	No
<i>FAQ Handling ABO Incompatible Transfusion Situations</i>	09/23/14	No
<i>FAQ How to File a New Service Request for Changes to VBECS</i>	12/08/16	No
<i>FAQ How to take faster screen shots from Remote Desktop Session</i>	12/17/14	No
<i>FAQ Identifying a Comparable Blood Product Code</i>	09/03/21	Yes
<i>FAQ Local Facilities</i>	06/12/20	No
<i>FAQ Modification Target Not Available</i>	11/28/17	No
<i>FAQ Multidivisional QC Rack Workaround</i>	11/28/17	No
<i>FAQ Order Status Clarification</i>	11/15/17	No
<i>FAQ Polyspecific AHG Not Used for Testing</i>	01/29/10	No
<i>FAQ Proper Use of PIV Card with VBECS</i>	09/14/21	Yes
<i>FAQ QC Setup</i>	01/29/10	No
<i>FAQ Retesting QC</i>	11/01/11	No
<i>FAQ Retrieving an Expired Order</i>	12/07/17	No
<i>FAQ The Difference Between Transfusion Only and Full Service Facility Types</i>	02/08/10	No
<i>FAQ VBECS Blood Product Hierarchy</i>	03/28/19	No
<i>FAQ VBECS Computer Crossmatch Decision Tree</i>	02/08/12	No
<i>FAQ Weak D Policy</i>	01/11/10	No
<i>FAQ Workload Assignments Single vs Batch Processing</i>	07/01/20	No

Customer Support

Contact your **Local/Regional** Office of Information Technology (OIT) or Laboratory Information Manager (LIM) if you encounter VistA or CPRS connection problems and for training support **before** contacting the Service Desk (SD).



Please ensure local/regional VistA Support contact information is available at all times.

If you experience an FDA reportable adverse event (patient death or serious injury) that VBECS may have caused or contributed to, contact the Service Desk directly to enter a ticket for Blood Bank software support.

If the problem remains unresolved after local VistA triage, call the Service Desk (below) and specify the Enterprise Application be set as VBECS (VistA Blood Establishment Computer Software)

Service Desk Contact

REDACTED

For troubleshooting error messages in VBECS that read "Contact Your System Administrator", contact the Service Desk for VBECS Server support.

References

- *ISBT128 Standard Technical Specification v 5.10.0*

VBECS SharePoint Site

The VBECS SharePoint site provides a location for additional information related to the VBECS application such as FAQs, installation status, remote desktop and report share shortcuts, and release history.

REDACTED

Installation Qualification (IQ) Documentation

Test Account Upgrade to VBECS 2.3.3 Revision A	
Required Patch Installation	VistA Patch: None Server Patch: VBECS 2.3.3 Revision A
Installation Process for VBECS 2.3.3 Rev A	Installed by the VBECS team. A small number of sites will be installed each day over several days.
Expected Downtime	The installation and migration is expected to take several hours but may take up to 24 hours. The existing test environment will no longer be available once the migration begins.
Installation Communication for VBECS 2.3.3 Rev A	The BBM Team will coordinate with POC for each site about the date of migration to VAEC. The status of migration will be communicated directly to the affected users.
Site Responsibility	<ul style="list-style-type: none"> • Join VBECS-L message board on ListServ, if needed. • Communicate any changes to your site supervisor and Point of Contact (POC) since the last patch install to the BBM team to the email group “VA OIT BBM Team”.
Site Record of Patch Installation	Sites should take and save a screenshot of the VBECS Help, About window after the Test installation is performed. This displays the VBECS updated version information.

Production Account Upgrade to VBECS 2.3.3 Revision A	
Required Patch Installation	VistA Patch: None Server Patch: VBECS 2.3.3 Revision A
Installation Process for VBECS 2.3.3 Rev A	Installed by the VBECS team. Each site will schedule a date for installation and migration. The VBECS team will contact sites for installation date/time when the production installation window begins.
Expected Downtime	The installation and migration is expected to take several hours but may take up to 24 hours. The existing production environment will no longer be available once the migration begins. The site will follow downtime procedures until the migration completes.
Installation Communication for VBECS 2.3.3 Rev A	<ul style="list-style-type: none"> • ListServ message sent at the start of the production installation window. • The BBM Team will coordinate with POC to schedule a date/time of production migration. • The status of migration will be communicated directly to the affected users.
Site Responsibility	<ul style="list-style-type: none"> • Perform local validation, training, and set-up requirements prior to Production installation. • Join VBECS-L message board on ListServ, if needed. • Communicate any changes to your site supervisor and Point of Contact (POC) since the last patch install to the BBM team to the email group “VA OIT BBM Team”.
Site Record of Patch Installation	Sites should take and save a screenshot of the VBECS Help, About window after Production installation is performed. This displays the VBECS updated version information.

Validation Planning

The following is a flowchart to help assess changes for validation planning.

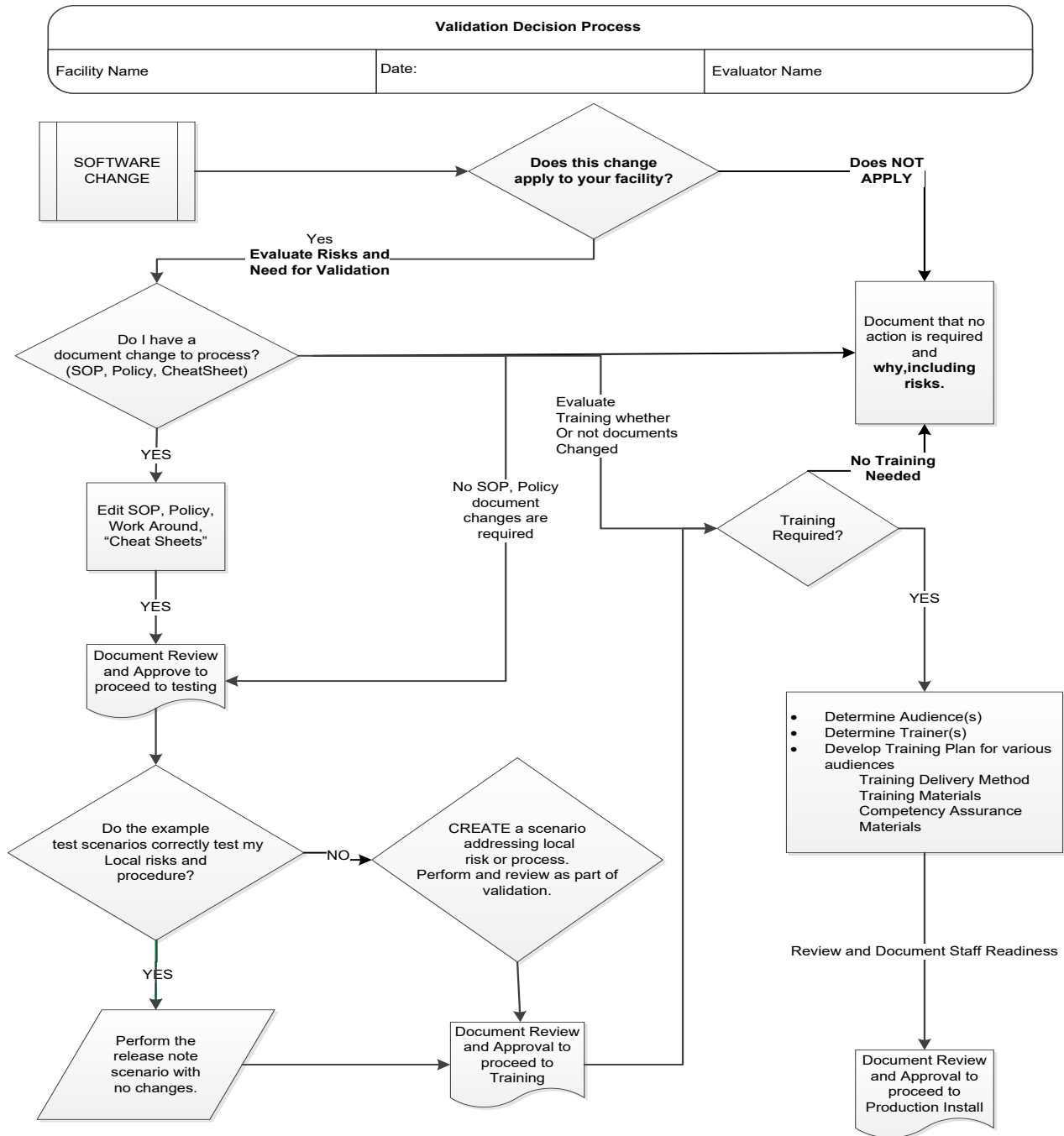

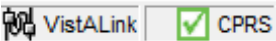


Table 1: Updates by Option

ID	Option	Problem Summary	Change Summary	Validation Scenario	Change applies to my facility. (Y/N)	Local risk Assessment (Low, Med, High)	SOP revision required. If yes, identify it.	Staff training needed. (Y/N)	Scenarios or validation must be performed. (Y/N)
1	Access to the new VBECS servers	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	Verify that all users can access and run VBECS on the new servers. Use both PIV login and non-PIV login if you have PIV exempt users.					
2	Critical areas of the system	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	Validate the ability to transfuse blood products to patients. Run scenario beginning with entering new blood products into the system, placing a transfusion order in CPRS, accepting an order in VBECS, and assigning blood to the patient, performing pre-transfusion testing, crossmatch, issue and finally the transfusion. Verify that you can successfully print BTRFs and Caution tags.					
3	Interfaces	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	Using the data from previous scenario, verify that all information generated in VBECS is visible in CPRS on the Blood Bank Report. Verify that orders used in testing are showing as completed in CPRS. If you have an automated instrument interfaced with VBECS perform some or all pre-transfusion testing using the instrument to verify that the connection to the instrument is working.					
4	Reports and printing	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	Identify your site's commonly used and other critical reports. Print or export these reports before the migration to VAEC. After the migration, print or export the same reports again and verify that they match previously printed reports. Also make sure that these reports display correctly in VBECS.					

ID	Option	Problem Summary	Change Summary	Validation Scenario	Change applies to my facility. (Y/N)	Local risk Assessment (Low, Med, High)	SOP revision required. If yes, identify it.	Staff training needed. (Y/N)	Scenarios or validation must be performed. (Y/N)
5	Report export	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	Export some of the reports to PDF, Excel or Word (whichever format you usually use). Verify that you can access and open exported reports from the new VAEC file share, and that those files can be copied to your local workstation. Verify that a VBECS Admin user can delete or rename the report files.					
6	VBECS Status Bar	Migration from AITC/PITC to VAEC. These are regression scenarios to demonstrate the system works as it did previously.	VBECS servers were migrated to the new data center.	<p>Status bar is located at the bottom of the main VBECS window and contains information about logged in user, division, current time, pending orders, pending patient updates, VistALink status and CPRS status.</p> <p>Verify that after successfully logging into VBECS the status bar:</p> <ul style="list-style-type: none"> Shows correct name of the user and division Shows correct time that ticks forward (wait a minute to see if the time has moved forward) Shows pending orders notification after new orders were placed in CPRS  (verify only if order notifications are enabled for your site) Shows VistALink and CPRS icons that indicate that your interfaces are functioning properly 					

ID	Option	Problem Summary	Change Summary	Validation Scenario	Change applies to my facility. (Y/N)	Local risk Assessment (Low, Med, High)	SOP revision required. If yes, identify it.	Staff training needed. (Y/N)	Scenarios or validation must be performed. (Y/N)
7	New printer setup in VBECS Admin	Users were unable to setup a new printer on the server (at AITC).	New option was added to VBECS Admin allowing users to setup a new printer.	<p>Open VBECS Admin and select Edit Printers. Write down the name, driver, and IP address of your currently defined printer.</p> <p>Click Remove to remove the printer. Confirm removal (this process can take up to 15 minutes to finish).</p> <p>Once the printer is removed set it up again by clicking Click here to Define a new printer.</p> <p>Enter the previously recorded information in the proper fields and click Define new Printer. Confirm the definition (this process can take up to 15 minutes to finish). The screen will automatically refresh to let you know when the process is done.</p> <p>Click Print Test Page to verify that the newly setup printer is functioning.</p> <p>Close VBECS Admin and open VBECS. Try printing any report from VBECS on the newly setup printer. Verify the report printed successfully.</p> <p>* Warning: When performing this validation in your production account, the printer will be offline for 30 minutes which may affect order printouts.</p>					
8	Throughout VBECS, Unit ID field	Entering spaces into the Unit ID field and pressing Tab causes VBECS to crash	VBECS will no longer crash if spaces are entered into the Unit ID field.	No validation needed.					

This is the last page of *VBECS 2.3.3 Release Notes*.