Date: **April 19, 2018**

Customer: **California State University – Long Beach**

Subject: Compliance with Section 508 Accessibility Standards, 36 CFR Part 1194 ("508 Standards")

Product: **SAS® Education Analytical Suite software, for version 9.4 of the SAS® platform**

Contact: accessibility@sas.com

The information in this document is provided by SAS Institute Inc. ("SAS").

The SAS® Education Analytical Suite software (hereafter "the software") for version 9.4 of the SAS® platform allows post-secondary degree-granting institutions and their affiliates to license the SAS® foundation technologies. Because the software is distributed as a bundle, the software fees are reduced substantially, compared to licensing each component separately.

The SAS® Education Analytical Suite software for version 9.4 of the SAS® platform includes nearly two dozen components, which, for accessibility compliance, may be divided into three groups:

Components that have their own user interfaces are listed below with their respective accessibility compliance statements:

- Base SAS® software version 9.4, which includes:
  - Display Manager System software
  - Output Delivery System software
  - Enhanced Editor software
  - Enterprise Guide® software
  - Universal Viewer software
  - Package Viewer software
- SAS/ACCESS® software to a number of interfaces including PC Files
- SAS/GRAPH® software
- SAS Integration® Technologies
- SAS® Management Console software

For components whose functionality is surfaced through the Base SAS® user interface, see the VPAT Base SAS® software version . These include SAS/SHARE®, SAS/CONNECT®, SAS/STAT®, SAS/ETS®, SAS/OR®, SAS/IML®, and SAS/QC®.

Based on technology maturity, there are some components for which SAS has no plans to attempt Section 508 conformance. These are listed in the No Plans section.

No Plans

The following products will not be fully Section 508-compliant. Products for which SAS has no plans to enhance accessibility include:

SAS/AF®, SAS/ASSIST®, SAS/EIS®, SAS/FSP®, SAS/GIS®, SAS/INSIGHT®, SAS/LAB®, SAS/SPECTRAVIEW®, and Enterprise Reporter™ software for the 9.2 platform, SAS/CALC® software for the 6.12 platform, Oros® ABC/M, Oros® Analytics, Oros® Scorecard, and Oros® Value Chain Analyzer.

1. Base® SAS software

Base SAS® software, Desktop Operating System, delivers a highly flexible and extensible fourth-generation programming language specially designed for data access, transformation and reporting. It includes a rich library of encapsulated programming procedures for data manipulation, information storage and retrieval, descriptive statistics and report writing.

The following components of Base SAS® software for version 9.4 of the SAS® platform Desktop Operating System have user interfaces:

1. Display Manager System software
2. Output Delivery System software
3. Enhanced Editor software
4. Enterprise Guide® software, version 6.1
5. Universal Viewer software
6. Package Reader software

These components are listed below with their respective 508 compliance statements.

A. SAS® Display Manager System software

SAS® Display Manager System software (hereafter 'the software') allows for the editing and execution of SAS language code, displaying the results of the execution, navigating and managing SAS libraries, options, and launching SAS products.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	The software supports keyboard equivalents for all user actions. Users needing accessibility features are advised to run SAS using the following options: The –accessibility extended option will invoke any alternate interfaces the product provides for accessibility support. The -nomenuicons option will prevent menu items from using user-drawn icons, which cause problems in reading menus in some accessibility tools. Via keyboard alone, the user cannot access Colors and Attributes buttons at "sascolors" window.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	The software does not disrupt or disable the accessibility features of the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	Visual on-screen focus and tracking is provided throughout the software. Focus is exposed to assistive technology software. The Customize Tools dialog, found under the Tools->Customize selection from the main menu, presents several icon items in a command button form for easier tracking of focus and easier selection. Explorer window property dialogs, found by using F10 or the MB3 context menu, present tabbed dialogs in command button format as well. This improved accessible interface is provided through the use of the -**accessibility extended** option.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with a minor exceptions	User interface object information is available to assistive technology throughout most of the software. To ensure that proper object information is being provided to any assistive technology software, it is best to use both the -**accessibility extended** and the -**nomenuicons** options. **Exceptions**: • JAWS reads the same label for each edit box, rather than reading the associated label. • Certain text in Import/Export windows cannot be read
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Bitmap images are used in a consistent manner throughout the software.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	The software supports system settings for high contrast. The software provides additional methods of color enhancement through the use of SASColor and the ability to set color choices in Preferences. Through SASColor, users can set color and attributes of window elements for customized visual display. The Enhanced Editor and Program Editor also provide the ability to set colors specifically for code editing through their Appearance Options dialogs. The software inherits system settings for fonts and color. The software inherits the operating system font settings within Treeviews, Listviews, Menus, and dialogs. (Note: User must reboot the system to apply changes to the system font settings.) The software provides the ability to completely customize fonts in the DMS environment through the use of the -**sysguifont** option to set control fonts and the **–font** option to set the font in text windows such as the Log, Output, and Program Editor windows. Note that the Enhanced Editor is not affected by the **-sysguifont** or **-font** options because it provides its own dialog for setting font and color.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software does not use animation to convey information to the user.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	The software uses color only as an enhancement of information. All user information is conveyed in a textual form.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	The software provides a wide variety of color selections to the user for producing customized contrasts. The **sascolor** command provides color customization for specific elements in the SAS environment such as borders, commands, messages, background, etc. Color customization is provided specifically for code editing through the use of the Enhanced Editor or Program Editor Appearance options. Both editors have several predefined color schemes but also provide the user with the option of modifying them to create their own color schemes, naming them, and saving them for future use.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	The software does not use flashing or blinking objects or text in any user interface other than the operating system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	The software does not use electronic forms.

B. SAS® Output Delivery System HTML software

SAS® Output Delivery System (ODS) software (hereafter 'the software') is a flexible component of Base SAS which allows users to customize, format, and direct SAS output to a variety of output destinations, including plain text, HTML, PDF, Postscript, RTF, XML, LaTeX.

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications – Detail		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supported	HTML generated by SAS® Output Delivery System (ODS) HTML software provides the required text equivalents for non-text elements including graph images. Users can take either the default or the user-specified description and use that string for the ALT tag value. The software offers a global option to produce accessible graphs. Pages containing such graphs include a link to generated text describing the graph and values shown. This is documented in a usage note, and will be surfaced to the user interface in later releases.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	The software does not include any multimedia presentation.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supported	The only information conveyed with color that is not also available without color is traffic lighting. Users control the use of color to convey traffic lighting using the STYLE statement with the FLYOVER attribute to assign a descriptive string to a table or to individual table cells.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supported	Style sheets do not affect whether the HTML document is readable or not.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The software does not include server-side image maps.

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications – Detail		
Criteria	**Supporting Features**	**Remarks and explanations**
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Supported	The software produces text-based versions automatically for images produced by client devices. Server-side image maps are not included. Client-side image maps are accessible automatically, supported through the use of javaimg and actximg devices, and the gif, png, and jpeg devices will also support accessible graphs, provided that users assign an Alt text (ALT= "some value") in a column in the dataset and reference it using the HTML= procedure option.
(g) Row and column headers shall be identified for data tables.	Supported	Enhancements to TAGSETS.PHTML (and TAGSETS.HTMLCSS and TAGSETS.HTML4 if needed) have been incorporated so that users using the ODS MARKUP destination with either HTML4 or HTMLCSS values will see row and column headers identified.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supported	Procedure code addresses associating data cells and header cells for data tables without requiring a tagset. For layout tables enhancements to TAGSETS.PHTML (and TAGSETS.HTMLCSS and TAGSETS.HTML4 if needed) have been incorporated so that users using the ODS MARKUP destination with either HTML4 or HTMLCSS values will produce html layout tables with summary= "PAGE LAYOUT". Regular data tables are addressed similarly so that the procedure's name and the output label are used for the SUMMARY tag value, or if the output label does not exist, the output name is used in its place.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supported	Links have been incorporated in TAGSETS.PHTML (and TAGSETS.HTMLCSS and TAGSETS.HTML4 if needed) using the TITLE= option value from the contents, pages, or body file.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The design of the software does not cause screens to flicker.

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications – Detail		
Criteria	**Supporting Features**	**Remarks and explanations**
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not applicable	The software has no instance where compliance cannot be otherwise achieved that would require text-only page equivalents.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supported	The following tagsets have incorporated <NOSCRIPT> </NOSCRIPT> tags: TAGSETS.HTML, TAGSETS.HTMLCSS and TAGSETS.HTML4. Users can modify this tagset to add appropriate strings when JAVASCRIPT is used.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21 (a) through (l).	Supported	Graphic ActiveX controls are in compliance with 1194.21 Criteria (a) through (l).
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	The software uses no electronic forms.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Not applicable	The software uses no repetitive navigation links.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not applicable	The software requires no timed responses.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	The software supports keyboard equivalents for all user actions.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with a minor exception	The software does not disrupt or disable the accessibility features of the operating system. **Exception**: when in high contrast in an open context menu, the background surrounding the icon is a distorted color. It does not impact performance.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	The software provides a well-defined on-screen indication of the current focus.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exceptions	Sufficient information about the user interface is almost always available to the Assistive Technology. **Exceptions**: • The icons to identify the type of output in the Results window do not have adequate labels for JAWS to identify them. • The icons in the Template Contents List are not labeled so extraneous information is read by JAWS.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with a minor exception	The software does not override user selected contrast and color selections. However, as stated in Criterion (b), when in high contrast in an open context menu, the background surrounding the icon is a distorted color. It does not impact performance.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	Software contains no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color coding is not used as the only means of conveying information.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The product does not allow the user to adjust color and contrast settings.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	Software uses no flashing or blinking elements beyond the system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	The software does not use electronic forms.

C. SAS® Enhanced Editor software

SAS® Enhanced Editor (hereafter 'the software') is an ASCI editor that uses visual aides to help programmers write and debug SAS programs. It shares many features with the Program Editor and it is surfaced within the Display Manager interface.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with minor exceptions	The software supports keyboard equivalents for most user actions with these exceptions: • Keyboard shortcuts do not behave as documented with Do/End pair especially when pair is used in macro. • User is not able to bring up text editing criteria list using the keyboard

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	The software does not disrupt or disable the accessibility features of the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	A well-defined on-screen indication of current focus helps users navigate and debug the SAS code.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported	The software is exposed to Assistive technology. JAWS Screen reader is able to read the textual information.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the software.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text content, text input caret location.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	The software supports user selected contrast and color selections and other individual display attributes.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software contains no animation.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	The software has features that require conveying the information, indicating an action, prompting a response or distinguishing a visual element by color coding. However system provides user to change the colors settings to get them distinguish while working.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	The software permits users to adjust color and contrast settings to accommodate personal preferences and visual needs.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The software contains no blinking or flashing text aside from the system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	With the exception of items listed in Criterion (a), people using Assistive Technology can access the information, field elements, and functionality required.

D. SAS® Enterprise Guide® software, version 7.1

SAS® Enterprise Guide® software, version 7.1 (hereafter 'the software') is a project-oriented Microsoft Windows® application that enables users to access data locally or on SAS servers, manage the data, perform basic reporting and summaries, perform basic and complex data analyses, utilize SAS graphics and export or publish results to SAS servers and other Windows or server-based applications.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with exceptions	Alternatives to some actions typically accessed via mouse, have keyboard accessible shortcuts; keyboard shortcuts are documented in the online help system. Exceptions include: • In the table creation interface of the Summary Tables task, the Preview area on the Tables tab of this task does not provide keyboard equivalents to the drag-and-drop positioning of elements. • Page up/down keys do not cycle through tabs. • Unable to select summary columns in query builder using keyboard. • Several locations have duplicate access keys. Some access keys do not function as intended.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with exceptions	OS settings are inherited with some exceptions. • The application does not fully inherit High Contrast themes from the OS. • Scroll bars do no properly resize when text size is changed at the OS level.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported with a minor exception	The software provides support for assistive screen magnification utilities by 'moving' the system caret to allow the assistive tools to track the central point of focus within the user interface. • In some wizard controls, the order of focus is hard to follow or the indication of the location of focus is missing. • The Prompts window does not have correct tab order. • Focus is lost after tabbing through the random samples task.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with major exceptions	The software introduces a global option to generate text versions of graphs (accessible graphs). Users may specify that the code %GACCESSIBLE be run to produce accessible graphs. Visualizations are not read by the screen reader. Exceptions include: • Text and labels read incorrectly in the Map Chart task and the Property List control. • Status bar messages are not read by the screen reader. • Sometimes the screen reader will stop reading the application after the mouse cursor is moved.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	The images used the software are the 'standardized' images for the represented action wherever such standard images exist. All non-standard images are used in a consistent manner throughout the product for the action represented.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard Windows API and system functions to display text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with major exception	System and user defined color schemes and font settings are not fully inherited by the application. Several components from the application will not have the correct color or font settings.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supported	A setting is provided within the product software, which replaces graphical animations with a text description of the information being conveyed by the animated.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	The software does not rely on color alone to convey information.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	Predefined high contrast color schemes are provided among the software's sample color schemes. Users are able to further customize these schemes or develop their own should the need arise.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	The software does not use blinking text or objects, other than system provided cursors/carets, anywhere within the user interface.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported with a minor exception	Excepted as noted with respect to Criterion (a) and (d), the software allows people using Assistive Technologies to access the information, field elements, and functionality required for completion and submission of interactive dialogs.

E. SAS® Universal Viewer® software

The SAS® Universal Viewer (the "software") is a .NET application for the Windows environment to view SAS data sets and other simple text-based files. You cannot edit SAS data sets with the SAS Universal Viewer, but you can sort and filter data sets. The SAS Universal Viewer enables you to view the contents of SAS data sets without invoking SAS and without installing SAS on your machine.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	Keyboard focus can become trapped in the text field. Some Access Keys are duplicated throughout the interface.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with exceptions	With Windows High Contrast #2 built-in theme, on the Properties tab, the foreground text of the tabular list is not initially visible. The text is readily visible with High Contrast #1 or the White or Black built-in themes. The items not visible could potentially prevent a user from fully utilizing the application.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported with minor exceptions	Keyboard focus can become trapped in the text field.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with minor exceptions	In most cases, the name, state, and function of interface elements is surfaced to assistive technologies with **exception**: • Inactive buttons are not read by the screen reader.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	With Windows High Contrast #2 built-in theme, on the Properties tab, the foreground text of the tabular list is not initially visible. The text is readily visible with High Contrast #1 or the White or Black built-in themes.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software contains no animation.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color alone is not used to indicate meaning.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The product itself offers no adjustments for color; it only inherits user settings from the operating system.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	Software uses no flashing or blinking elements beyond the system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	People using assistive technologies can access the information, field elements, and functionality required to operate the software with **exception**: • Inactive buttons are not read by the screen reader.

F. SAS® Package Reader software

The SAS® Package Reader (hereafter 'the software') is a desktop application that enables you to retrieve and view the contents of a SAS Package as an archive file without having to run SAS.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with exception	The software supports keyboard equivalents for all user actions except that there is no way to rearrange columns in the table view using the keyboard only.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	The software does not disrupt or disable the accessibility features of the operating system.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported with exceptions	Visual on-screen focus and tracking is provided throughout the product. **Exceptions**: • Current focus is not shown in the main toolbar • Visual focus is not shown in the tree view or table view with first navigation
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exceptions	Assistive Technology is supported except in a few locations. For example, the status of "clear status" button is not exposed to the screen reader
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	When the user sets the operating system settings to high contrast, some attributes of that setting are not inherited.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	Software contains no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	The software does not rely on color alone to convey information.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The software offers no native methods to adjust color and contrast settings.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	Software uses no flashing or blinking elements beyond the system caret.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported with exceptions	When navigating with a keyboard through the Browse window to choose a path, the focus disappears. The workaround is either to count the Tab presses and listen closely to the items or to type the path explicitly.

Accessibility Compliance with Section 508, 36 CFR §1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supported with exceptions	Limitations in the keyboard accessibility of the software inhibit use of the software by people using assistive technology. See item 1194.21 criteria (a), (l) and 1194.22 criteria (a-b), (e – k) for more information.
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are visually impaired shall be provided.	Supported with exceptions	The software does not inherit most operating system display attributes, such as high contrast or large font themes. See item 1194.21 criteria (b), (c), and 1194.22 criterion (c).
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided	Not applicable	User hearing is not required to use the software.
(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not applicable	Beyond user-configured system events, the software does not use audio.
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	User speech is not required to use the software.

Accessibility Compliance with Section 508, 36 CFR §1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and explanations**
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supported with exceptions	As described in 1194.21 criterion (a), device independence via keyboard operation, not requiring fine motor control. The software accommodates limited reach and strength via operation with Windows StickyKeys and FilterKeys enabled. As described in 1194.21 criteria (a) and/or (n) and/or (o) and/or (p)), some keyboard accessibility limitations exist. People with limited motor control, reach, or strength may find activating Windows MouseKeys helpful.

2. SAS® SAS/ACCESS® to PC File Formats software

SAS/ACCESS® to PC File Formats software (hereafter 'the software') is a product that provides connectivity between SAS and PC files for data access and update. The product is comprised of two interface elements, an export wizard and an import wizard. The VPAT presented below encompasses both of these elements.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	The software functions with keyboard alone; a mouse is not required.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with exceptions	**Exception:** When the operating system High Contrast is set, the wizards' background does not adopt the new setting; however, controls display in high contrast. Moreover, the user can customize color preferences in the Base SAS interface from which the PC Files wizards are surfaced.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	On-screen indication of focus is provided through all wizards' windows.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported	Information on identity, operation, and state of elements is available to assistive technology.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently in the wizards.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	Operating system functions for displaying text are used.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	The wizards derive color and contrast settings from users' operating systems' settings for colors, fonts, and dialog box styles.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The wizards contain no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color is not used to convey meaning in the wizards.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The wizards contain no independent color adjustment, deriving color settings from users' operating systems.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The wizards contain no flashing or blinking elements.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	People using assistive technology can access the information and user interface elements and their functionality.

Accessibility Compliance with Section 508, 36 CFR §1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supported	User vision is not required to use the software.
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people who are visually impaired shall be provided.	Supported with minor exceptions	As described in 1194.21 Criterion (b), some limitations exist that hinder support for Assistive Technology used by visually impaired people.
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided	Not applicable	User hearing is not required to use the software.

Accessibility Compliance with Section 508, 36 CFR §1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and explanations**
(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not applicable	Beyond user-configured system events, the software does not use audio.
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	User speech is not required to use the software.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supported	User reach and strength is not required to use this software.

3. SAS® SAS/ACCESS® products all for version 9.4 of the SAS® platform:

- SAS/ACCESS® Interface to ADABAS
- SAS/ACCESS® Interface to CA-IDMS
- SAS/ACCESS® Interface to DB2
- SAS/ACCESS® Interface to Greenplum
- SAS/ACCESS® Interface to IMS
- SAS/ACCESS® Interface to Informix
- SAS/ACCESS® Interface to MySQL
- SAS/ACCESS® Interface to NeoView
- SAS/ACCESS® Interface to Netezza
- SAS/ACCESS® Interface to ODBC
- SAS/ACCESS® Interface to OLE-DB
- SAS/ACCESS® Interface to Oracle
- SAS/ACCESS® Interface to SQL Server
- SAS/ACCESS® Interface to Sybase
- SAS/ACCESS® Interface to System 2000 software
- SAS/ACCESS® Interface to Teradata

SAS/ACCESS® interface software (hereafter 'the software') is an out of box solution that provides connectivity between SAS and other databases to access and update data. The software communicates with the database via its client-side libraries. SAS/ACCESS® interface software is comprised of two interface elements, a New Library window and a Database Prompt window. The VPAT presented below encompasses both of these elements.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with minor exception	**Exception**: • In the New Library window, pressing tab and shift tab moves the focus to controls in the dialog. However, when focus is on the Enable at Startup checkbox, pressing an arrow key results in no window object having focus.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exception	**Exception**: • In the New Library window, when focus moves to the Library Information area, semantic information on specific controls is not provided to assistive technologies.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Not applicable	There are no bitmap images.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software contains no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	No color settings are offered within the applications.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	The software uses no electronic forms.

4. SAS/GRAPH® for version 9.4 of the SAS® platform

SAS/GRAPH software ("the software") is the data visualization and graphics presentation component of the SAS System. Through the Output Display System (ODS) in Base SAS software, you can produce SAS graphs for display in an Internet browser. Web presentation methods include an ActiveX control (for Microsoft Windows platforms), Java applet, and also static graphs. When these methods are specified as device targets in the ODS statement, the GOPTION ACCESSIBLE parameter will produce accessible graphics. See the SAS Technical Support web site for information: http://support.sas.com/rnd/datavisualization/access508/.

With SAS 9.4, SAS/GRAPH® also includes the ODS Graphics Editor and ODS Graphics Designer components.

A. SAS/GRAPH® ActiveX Component

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supported	If you specify ACCESSIBLE on the GOPTIONS statement when using ODS with the Java-based or ActiveX-based device drivers, The software generates descriptive text and data that is relevant to the graph, such as the summary statistics that are represented by a bar chart. A link is created, exposed to screen readers, which users can activate to display an accessible table of the data underlying the graphic.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	Software contains no multimedia.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supported	Graph legends and other options provide non-color-based, contextual cues.

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications		
Criteria	**Supporting Features**	**Remarks and explanations**
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supported	Content is readable without an associated style sheet.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	Server-side image maps are not used.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Supported	Graphs produced with the drill-down option are client-site image maps.
(g) Row and column headers shall be identified for data tables.	Supported	Headers of data tables produced with the GOPTION ACCESSIBLE are identified.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supported	Markup of underlying data tables properly associate data cells with their corresponding header cells.
(i) Frames shall be titled with text that facilitates frame identification and navigation	Not applicable	Frames are not used.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The software uses no flashing or blinking elements beyond the system caret.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not applicable	Compliance is otherwise accomplished.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supported	JavaScript is used to activate the accessible graphs option, as described in criterion (a). If the user has disabled JavaScript, the link text is not visible but it is readable by a screen reader, and pressing Enter shows the accessible data table underlying the graphic.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21 (a) through (l).	Supported	The 1194.21 VPAT is provided for the SAS/GRAPH Java applet and ActiveX plug-in.

Accessibility Compliance with Section 508, 36 CFR §1194.22 Web-based Internet Information and Applications		
Criteria	**Supporting Features**	**Remarks and explanations**
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues	Not applicable	The software output uses no electronic forms.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Not applicable	The software output uses no repetitive navigation links.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not applicable	The software output uses no timed responses.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	The software output can be navigated via keyboard, by scrolling the view in the Internet browser.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with exception	The software output does not disrupt or disable activated accessibility features of other programs or the operating system, except that it does not inherit user settings for color and contrast, such as a high contrast operating system theme. See Criterion (j) for accommodations.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	When the software output contains hyperlinks, an on-screen focus indicator is present and programmatically exposed to Assistive Technologies.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exceptions	When produced with the GOPTION ACCESSIBLE, text equivalents are provided in SAS graphs for users of assistive technology. See 1194.22, Criterion (a). Most interface elements, including menu bar options and short-cut keys, are read by a screen reader (JAWS 9 used for testing); however, not all elements are read. Some exceptions include: • Labels associated with the buttons • Column headings in the list view in the Edit Data dialog Where keyboard access is provided, element information is exposed to assistive technologies. Where keyboard access is limited, because focus cannot be moved via keyboard to those elements, their information is not read by the screen reader (no shortcuts available for the menus in graph toolbar). See Criterion (a) for areas where keyboard access is limited.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with exception	When software output is displayed on a system where a user has modified system color and contrast setting, those custom selections are not inherited. However, the programmer who produces the graph can provide style options to accommodate accessibility needs. When high contrast mode is invoked with a black background, some icons may not display crisply.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	Software contains no animation.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color alone is not used to convey meaning. In graphs where color is the primary indicator of meaning, the programmer producing the graph can opt for line style changes to accommodate low vision or colorblind individuals.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	The programmer producing the software output has ample variety of color and contrast settings to accommodate low vision or colorblind individuals.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	The software uses no flashing or blinking elements beyond the system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	The software uses no electronic forms.

B. SAS/GRAPH® ODS Graphics Editor

The SAS/GRAPH ODS Graphics Editor is a complementary tool in the ODS graphics system. It is an interactive graphical application used to edit and annotate ODS graphics that are created by a wide variety of SAS procedures. You can save the results as an image for inclusion in a report or as an SGE file that you can edit in the future.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with exceptions	Exceptions include: • Graphs produced with the editor are not keyboard accessible • Properties of text on the graph cannot be edited via keyboard. • A mouse click on the graph is required to display the Plot Properties dialog.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	The software does not disrupt or disable any of the keyboard accessibility features incorporated within the operating system
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported with exception	Exceptions include: • Toolbar buttons on the graph lack focus. • Drop downs lack visual indication of focus
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exception	Where keyboard access is limited, because focus cannot be moved via keyboard to those elements, their information is not read by the screen reader. See Criterion (a) for areas where keyboard access is limited. Additional exceptions include: • JAWS cannot differentiate the title or footnote inserted in the graph. • JAWS cannot read some objects in Plot properties dialog, Graph properties dialog, and Print setup dialog. • JAWS cannot read the text in the help about dialog. Note: Tested with JAWS version 14.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with exception	Exception: Some toolbar buttons are not visible in high contrast #2 mode

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supported	Software contains no animation
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color alone is not used to convey meaning
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	Graph properties and the styles as well as individual plot properties can be changed to ensure color contrast for a range of vision abilities
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	Software uses no flashing or blinking elements beyond the system caret
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	Software contains no electronic forms

C. SAS/GRAPH® ODS Graphics Designer

The SAS/Graph ODS Graphics Designer is an interactive GUI tool for creation of statistical graphs. Via an intuitive, Interactive interface, this tool allows users to create plots that are commonly used in various analytical applications. The tool is based on the Graph Template Language (GTL), the same system that is used by SAS analytical procedures and SAS/GRAPH SG procedures.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with exceptions	Operation via keyboard is inhibited in several ways: Tab cannot access some controls in the graph properties dialog Pressing Alt+Spacebar activates system menu of the main application rather than active window No mnemonics are assigned for the menu items No keyboard support is provided to drag-and-drop in the graph Cannot delete shared variable

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	The software does not disrupt or disable any of the keyboard accessibility features incorporated within the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Not supported	Pressing tab key does not change the visual focus indicator; however, the programmatic focus does change, as confirmed in the Java accessibility utilities -Focus cannot be seen on some drop downs
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exception	Where keyboard access is limited and focus cannot be moved via keyboard, element information is not read by the screen reader. See Criterion (a) for areas where keyboard access is limited. Additional exceptions include: Most labels in the style editor dialog are not read by JAWS. Labels for edit boxes and frames in preferences dialog are not read by JAWS. JAWS cannot read the text on the help about dialog. Incomplete and incorrect information read for radio buttons
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard operating system functions for displaying text.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with exceptions	When the operating system's high contrast #2 (large) color scheme is invoked: The icons on the buttons for minimize, maximize, and close on the child windows are not at all visible. The text on the menu bar and title bars of the dialogs is displayed in large font. All other text i.e. text on the graph, text on the preferences and style editor dialogs etc. is displayed in the normal font.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supported	The software contains no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color alone is not used to convey meaning.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supported	Graph properties and the styles as well as individual plot properties can be changed to ensure color contrast for a range of visual abilities.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	The software uses no flashing or blinking elements beyond the system caret
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not supported	As described in criteria (a), (c), and (d), exceptions with keyboard accessibility, visual focus, and exposure of interface element properties seriously inhibit use of the software by people using Assistive Technology.

5. SAS® Integration Technologies software for version 9.4 of the SAS® platform

SAS® Integration Technologies software (hereafter 'the software') provides an intelligent application environment in which data from across numerous unrelated systems can be easily gathered, stored analyzed and distributed in a simple and timely manner. The software functions largely in the background; it is not expected that the majority of customers' end users would directly interface with it. Only customer support personnel are intended to directly interface with the software. The software has two graphical user interface components surfaced in the SAS® Management Console, the Foundation Services Plug-in and the Publishing Framework Plug-in.

The other graphical user interface components of SAS® 9.4 Integration Technologies software are:

- Integration Technologies Configuration - This is used to test and troubleshoot connections to SAS servers.
- SAS OLAP Data Provider - This Common Object Model (COM) component is used to integrate SAS OLAP Cubes into third-party applications such as Microsoft Excel.
- Integration Technologies Administrator – This Java application enables users with administrative privileges to create, modify, and delete objects on a LDAP server that define the metadata supporting SAS Integration Technologies. These objects include channels and subscribers (used by Subscription Manager), archives of published packages (deployed by the Publishing Framework), data sources (tables and libraries), and stored processes (SAS programs configured to be run by a client).
- Subscription Manager – This Java applet is used to subscribe to and unsubscribe from channels and to specify how information is delivered. Managing subscription services is like managing other resources such as e-mail alias lists or Internet list servers.

The VPAT presented below encompasses all of these components.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported	The software allows for keyboard only navigation of all functions.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported	Note: The opening dialog of the Configuration Wizard does not allow background color change. However, on High Contrast White, it still meets the necessary contrast criteria.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported	The software provides a well-defined on-screen indication of focus.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with minor exceptions	In the IT Administrator and Subscription Manager, labels for some control elements are not fully exposed to assistive technologies. In the SAS Integration Technologies Configuration-Bridge Parameters window, prompt text for some controls is read after the label and controls themselves. Some descriptive text in the dialog boxes of the Configuration Wizard is not available to JAWS. However, the same information can be accessed on the help dialog, which is accessible.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	Images are used consistently throughout the software.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	Textual information is provided through operating system functions for displaying text.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported	The software does not override user selected contrast settings. Note: As stated in criterion (b) the opening dialog of the Configuration Wizard does not allow background color change. However, on High Contrast White, it still meets the necessary contrast criteria.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software contains no animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported	Color alone is not used to indicate meaning.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	No color settings are offered within the applications.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The software does not use flashing or blinking objects or text in any user interface other than the operating system caret.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported	As described in criterion (a), through its keyboard accessibility, the software enables people using assistive technology to access and operate the software.

6. SAS® Management Console software

SAS® Management Console software (hereafter "the software") provides an enterprise class, single point of control for SAS administrative tasks. Using an extensible framework, any SAS product can extend the console to administer its applications. The information provided in this checklist pertains to the SAS® Management Console framework and its various plug-ins. Some plug-ins are licensed separately with from SAS Management Console in other product offerings.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supported with minor exceptions	The software supports keyboard equivalents for all user actions. **Exceptions include:** • The F10 does not switch focus between sections. • A few access keys open the wrong function.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supported with exceptions	When the Microsoft Windows desktop color scheme is set to high contrast, some panels in the console content area do not inherit the system foreground and background color settings.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supported with exceptions	**Exceptions include:** • Empty tables do not show visual focus. • In the Configuration Manager plug-in, visual focus is lost when tabbing through the settings tab. • In Metadata Bridges, some edit fields show multiple instances of visual focus. • In the Metadata Investigator plug-in, in high contrast mode, visual focus indicator is absent.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supported with exceptions	Exposure of element information to assistive technologies is not complete. When tested with Freedom Scientific's JAWS Screen Reader, most control names, states and image names were read properly. **Exceptions include:** • In the SPDS Plug-in: ▪ JAWS cannot identify embedded controls in the table control. ▪ JAWS reads some control labels incorrectly, such as some edit boxes and combo boxes. • In the Metadata Investigator Plug-In: • JAWS cannot read the nodes in tree view, Description label, and the message displayed with the progress bar. See attachment for instructions on how to configure the software so Assistive Technologies will interoperate with the application.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supported	The software uses images consistently throughout its interface.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supported	The software uses standard function calls when providing text.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supported with exceptions	As noted in Criterion (b), some panels in the content area do not inherit the system foreground and background color settings when the display is set to high contrast. **Exceptions include:** • In the SPDS Plug-In: ▪ User cannot view expansion '+' icon in tree control. ▪ Checkbox controls have no visual focus indicator. ▪ Black text on the black (high contrast) background is unreadable. • In the Metadata Investigator Plug-In: • In high contrast mode, font settings are not inherited. • On-screen indication of the current focus is not visible.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The software does not use animation to convey information to the user.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supported with minor exception	The software relies on color in one instance to indicate security inheritance.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The software provides no additional color or contrast settings, beyond the platform and operating system settings.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supported	The software does not use flashing or blinking objects or text in any user interface other than the operating system caret.

Accessibility Compliance with Section 508, 36 CFR §1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and explanations**

(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supported with exceptions	People using Assistive Technology to use the software can access the information and functionality except as indicated in criteria (a), (c), and (d) above.
		Additional exceptions:
		• Configuration Manager Plug-In:
		  • Sometimes the software hangs up when switching between the Folders and Plugins tabs.
		  • In some cases, maximizing then restoring the window will reactivate the software.
		  • In Permissions Grant/Deny Areas, while navigating, checkboxes may check/uncheck at random, without providing state information to the Assistive Technology.
		  • In some instances, the software does not pass form element information to JAWS. This occurs with drop-down menus and certain edit boxes.

Attachment related to 1194.21(d) for SAS® Information Map Studio, SAS® Management Console, and SAS® OLAP Cube Studio software:

For Window-based assistive technologies to interoperate with SAS Java desktop applications the Java Access Bridge (JAB) is required. According to Oracle at http://www.oracle.com/technetwork/java/javase/tech/index-jsp-136191.html :

> "Java Access Bridge is a technology that exposes the Java Accessibility API in a Microsoft Windows DLL, enabling Java applications and applets that implement the Java Accessibility API to be visible to assistive technologies on Microsoft Windows systems. Java Accessibility API is part of Java Accessibility Utilities, which is a set of utility classes that help assistive technologies provide access to GUI toolkits that implement the Java Accessibility API."

Customizations to the standard install procedure are required to facilitate access to the JAB. This setup assumes that Java is already installed on the machine. A known risk is that SAS applications can get polluted by jar files that may be installed in the jre/lib/ext directory. To solve this problem, SAS implemented a custom class loader to replace the system class loader. The custom class loader loads only approved extensions that SAS configures based on the JRE the vendor provides. A consequence of hiding the existing directory is that it disables installed accessibility-related applications. The steps below describe the method to enable the launcher to recognize required JAB jar files.

1. Download the Java Access Bridge (http://www.oracle.com/technetwork/java/javase/tech/index-jsp-136191.html). The download process locates the jre\lib\ext subdirectory under the directory where the JDK is installed. The installation program copies the following files into that directory: jaccess.jar and access-bridge.jar. The JAB download also creates a jre\lib\accessibility.properties file containing the following line used by JVM on starting:

   assistive_technologies=com.sun.java.accessibility.AccessBridge.

2. Install the SAS® software.

3. In each of the SAS client application directories, edit the file that contains the approved extensions called; sas.java.ext.config. Add the two Java Access Bridge jars.
   access-bridge.jar
   jaccess-1_4.jar

To test this, download a demo copy of the Freedom Scientific JAWS screen reader (most widely used screen reader) from ftp://ftp.freedomscientific.com/users/hj/private/WebFiles/JAWS/J12.0.1170-32bit.exe . The evaluation version operates for 40 minutes before requiring a reboot.