



# **Santrax<sup>®</sup> Speaker Verification**

*Set Up and Maintenance*  
*Universal*

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## Introduction

This feature matches an employee's voice to a biometric voiceprint in the database to verify that the correct field worker is at the right place, at the right time, performing the right tasks.

During the Santrax Call, the employee will be asked to speak a phrase into the phone. Santrax will then compare the voice used on the call with the voice on record, and determine the probability that the voice on the call is the voice on record (displayed as a percentage).

There are three components to Santrax Speaker Verification:

## Enrollment Process

The supervisor, who must be enrolled in the system first before he/she can enroll others, calls into Santrax to enroll each employee. During the enrollment call, the employee is asked to speak the phrase "**At Santrax, my voice is my password**" a total of three times. The EVV system records the employee and creates the employee's voiceprint. A test call is then made to validate the voiceprint and familiarize the employee with the Speaker Verification System.

## Verification

Once enrolled, the employee makes their usual call into Santrax. After entering their Santrax ID, Santrax will ask the employee to repeat the phrase "**At Santrax, my voice is my password**" up to three times. The system will then provide a timestamp and the employee can continue with the Santrax call.

## Reporting

Santrax provides several ways of reporting Speaker Verification calls.

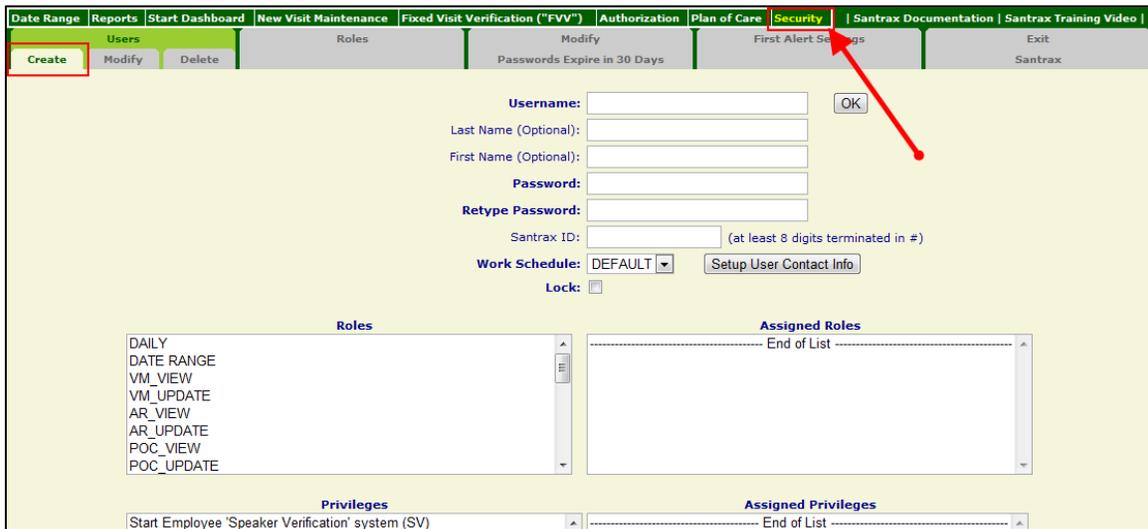
- The **Daily Call Listing** shows all calls made into Santrax that day. A Speaker Verification (SV) column on the right side of the report will display a green SV (👤) icon if the employee's voice was verified successfully (voice matched) or a red SV (👤) icon if the verification was unsuccessful (voice not matched). If a call initially fails Speaker Verification and was subsequently approved by management a red speaker with a green check-mark icon (👤) will appear in the SV column.
- The **Visit Maintenance** tab allows users to filter or sort visits that contain Speaker Verification Calls. Authentication results are color coded with a green speaker icon (👤) if successful and a red speaker icon (👤) for failed verification. You may also click to see the details of the call including listening to the authentication call and listening to the enrollment call. Management will also have the ability to override the system and personally verify the visit, which is indicated by a red speaker with a green check-mark icon (👤). A memo field will be available to allow you to document the action taken.

## Enrolling Supervisors and Employees.

### Supervisor Enrollment

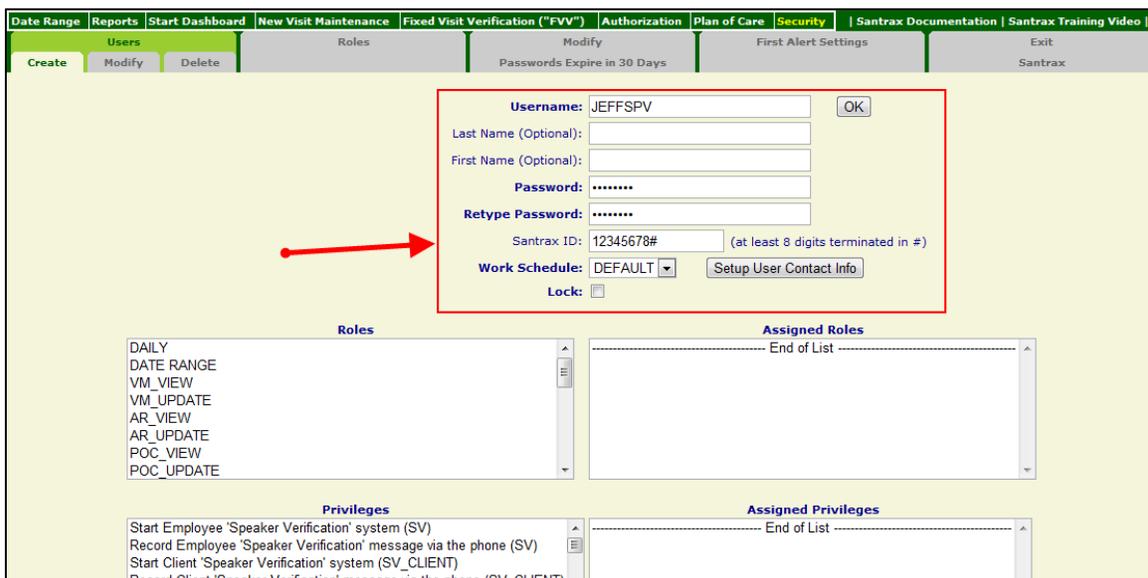
Supervisors must enroll themselves in Speaker Verification before they begin enrolling their employees.

Click the security tab twice to open the Security screen, at the Create Users tab.



**Figure 1: Access the Santrax Security Screen**

Enter the required information shown in bold. You must also enter a Santrax ID, eight numerical digits in length and followed by the pound sign (#).



**Figure 2: Create Supervisor**

Next, make a call into Santrax to begin enrolling your voice. When prompted: **"Welcome. Please enter your Santrax ID"**, enter the Santrax ID you set up on the Security screen, including the pound sign (#). In our example we enter 12345678#. This will trigger the Supervisors self-enrollment in Speaker Verification.

- Santrax will say: **"Please select two (2) for Speaker Verification, zero (0) to exit."**
  - Press two (2).
- Santrax will say: **"You will now be enrolled. The enrollment process requires you to repeat one simple phrase. Please repeat, At Santrax my voice is my password."**
  - Say: *"At Santrax, my voice is my password"*. The system will ask you to repeat this phrase a total of three times.
- Santrax will say: **"Your voice has been successfully recorded. You may begin enrolling employees the next time you call in. Good bye."**
  - Hang up.

## Employee Enrollment

Supervisors personally enroll each of their Agency Workers/Individual Providers to ensure that the right employee is being set up at enrollment time. The process is as follows:

- The supervisor calls into the Santrax system and enters their Santrax ID (including the # key) when prompted.
- Santrax will say: **"Please select two (2) for Speaker Verification, zero (0) to exit."**
  - Press two (2).
- Santrax will say: **"To verify your identity, please repeat – at Santrax, my voice is my password."**
  - Say: *"At Santrax, my voice is my password"*. The system may ask you to repeat this phrase up to three times.
- Santrax will say: **"To enroll an employee, press one (1). To enroll a client, press two (2). To return to the main menu, press zero (0)."**
  - Press one (1).
- Santrax will say: **"Enter the employee's Santrax ID to begin enrollment."**
  - Enter the employee's Santrax ID.
- Santrax will say: **"Press the pound (#) key to begin enrollment, or press 9 to cancel."**
  - Press pound (#). And hand the phone to the employee.
- Santrax will say: **"You will now be enrolled. Please repeat – at Santrax my voice is my password."**
  - The employee should say: *"At Santrax, my voice is my password"*. The system will ask the employee to repeat this phrase a total of three times.

- Santrax will say: **"Congratulations, you have successfully enrolled. Press the pound (#) key to perform a test call."**
  - Press pound (#).
- Santrax will say: **"To verify your identity, please repeat – at Santrax, my voice is my password."**
  - The employee should say: *"At Santrax, my voice is my password"*. The system may ask the employee to repeat this phrase up to three times.
- Santrax will say: **"The test call is complete. Please return the phone to your supervisor. To review the enrollment results press one (1), to perform another test call press two (2), to perform another enrollment press three (3)."**
  - Choose any desired prompt, or hang up.

## Speaker Verification During a Visit

When making a call into Santrax, after the employee enters their Santrax ID, the Speaker Verification system will ask the employee to repeat the phrase **"At Santrax, my voice is my password"** in order to verify their identity.

Speaker Verification will match the voiceprint on the call with the voiceprint recorded at enrollment time. The comparison will be done using a sophisticated algorithm and will calculate the probability that the two voices are the same person, displayed as a percentage. The result of 70% or above is considered a passed Speaker Verification.

The system will ask the employee to recite the phrase up to three times until the voiceprint has been verified and then provide a time stamp.

If the voiceprint fails verification:

- The system will still provide a time stamp and allow the caller to continue with the Santrax call after the third failed attempt.
- The failed call will be noted on the Daily Call Listing and Speaker Verification Listing reports and in Visit Maintenance for management review.
- The employee is never made aware of the results of the verification.

In order to ensure optimal conditions for speaker verification, we provide the following guidelines to enrolled employees:

- Speak at your normal pace. Do not alter the rhythm of your speech.
- Speak clearly. Do not mumble, eat or chew during the call.
- Speak in your normal voice. Do not alter the volume of your voice but if you are normally soft spoken, speak louder without shouting.

- Do not use the speakerphone. Do not use a wireless headset. If possible, try not to use a cordless phone. Call from inside the house or office, not outside. Eliminate as much background noise as possible by moving away from a TV, radio and other noise sources.

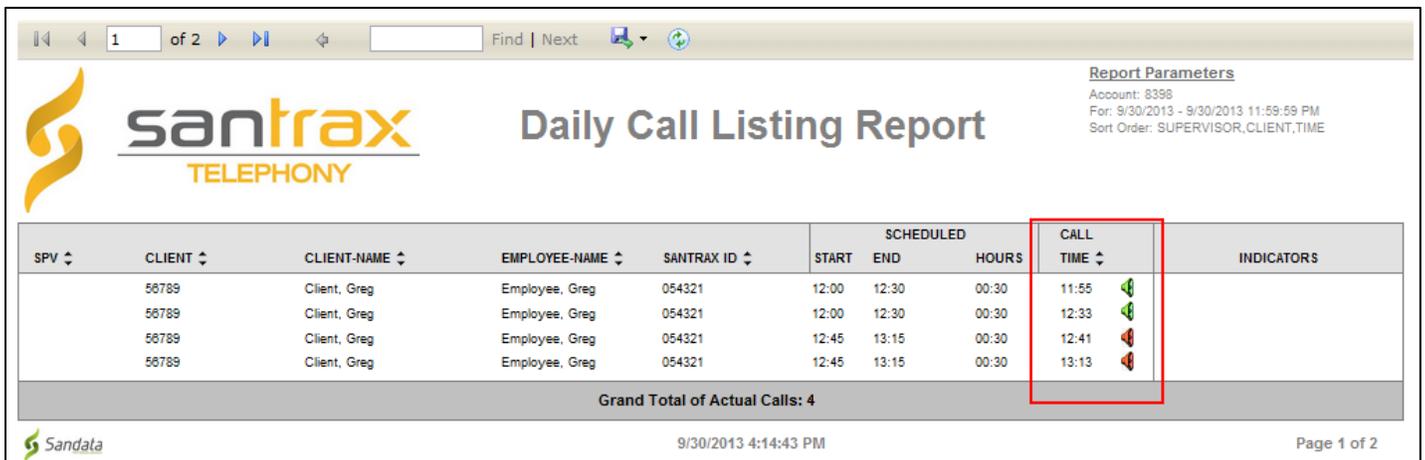
## Speaker Verification Reporting

Santrax provides several ways management can monitor calls that have been placed through the Speaker Verification system.

- The **Daily Call Listing** report provides Speaker Verification results for a specific day.
- The **Visit Maintenance** tab can also show Speaker Verification calls. Speaker Verification visits can be searched for, results can be sorted, individual calls can be monitored and management can manually verify a visit.

## Daily Call Listing

From the Report tab in Santrax, run the Daily Call Listing report to view all calls that came into the system for the date you select. The “SV” (Speaker Verification) column will display “” for those calls where verification was successful and “” where verification failed. If a call initially fails Speaker Verification and was subsequently approved by management a “” will appear in the SV column.



SPV	CLIENT	CLIENT-NAME	EMPLOYEE-NAME	SANTRAX ID	SCHEDULED			CALL TIME	INDICATORS
					START	END	HOURS		
	58789	Client, Greg	Employee, Greg	054321	12:00	12:30	00:30	11:55	
	58789	Client, Greg	Employee, Greg	054321	12:00	12:30	00:30	12:33	
	58789	Client, Greg	Employee, Greg	054321	12:45	13:15	00:30	12:41	
	58789	Client, Greg	Employee, Greg	054321	12:45	13:15	00:30	13:13	
Grand Total of Actual Calls: 4									

Figure 3: Daily Call Listing Report

## Performing Visit Maintenance

Visit Maintenance allows you to review, listen to, and approve all Speaker Verification calls.

To search for Speaker Verification visits in Santrax Visit Maintenance, click the **View Selected Visit Type** button from the Search Filters, and select one or both of the Speaker Verification related checkboxes. This will narrow the search results to include only the specified speaker verification calls.

Remember: Select the remaining search filters to ensure good results.

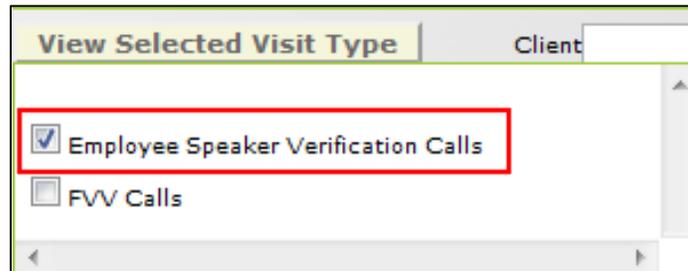
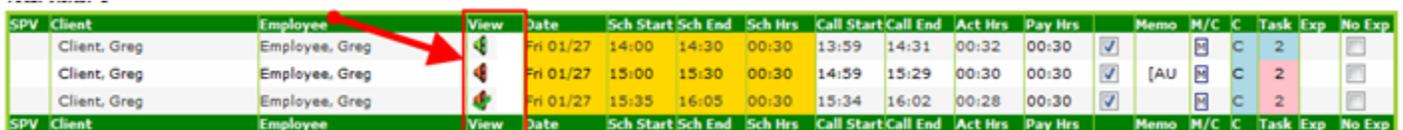


Figure 4: Speaker Verification Filters in Visit Maintenance

## Speaker Verification Icons in the View Column

There are three icons related to Speaker Verification that may be seen in the View column of Santrax Visit Maintenance. These icons are categorized as Pass, Fail and Verified Manually.

Icon	Name	Description
	Pass	All speaker verification calls affiliated with this visit received passing scores.
	Fail	At least one of the speaker verification calls affiliated with this visit received a failing score.
	Verified manually	All failed Speaker Verification calls that have been authorized manually. Click in the memo cell to see the date and time of the authorization as well as any comments entered during the time of the authorization.



SPV	Client	Employee	View	Date	Sch Start	Sch End	Sch Hrs	Call Start	Call End	Act Hrs	Pay Hrs	Memo	M/C	C	Task	Exp	No Exp
	Client, Greg	Employee, Greg		Fri 01/27	14:00	14:30	00:30	13:59	14:31	00:32	00:30	✓		C	2		
	Client, Greg	Employee, Greg		Fri 01/27	15:00	15:30	00:30	14:59	15:29	00:30	00:30	✓	[AU]	C	2		
	Client, Greg	Employee, Greg		Fri 01/27	15:35	16:05	00:30	15:34	16:02	00:28	00:30	✓		C	2		

Figure 5: Visit Maintenance Screen Results

## The Speaker Verification Popup

Click on any of the Speaker Verification Icons in the View column to access the Speaker Verification Popup menu for that visit.

SPV	Client	Employee	View	Date	Sch Start	Sch End	Sch Hrs	Call Start	Call End	Act Hrs	Pay Hrs	Memo	M/C	C	Task	Exp	No Exp
	Client, Greg	Employee, Greg		Fri 01/27	14:00	14:30	00:30	13:59	14:31	00:32	00:30				2		
	Client, Greg	Employee, Greg		Fri 01/27	15:00	15:30	00:30	14:59	15:29	00:30	00:30	[AU]			2		
	Client, Greg	Employee, Greg		Fri 01/27	15:35	16:05	00:30	15:34	16:02	00:28	00:30				2		

Figure 6: Icons in the View Column

The Speaker Verification popup menu displays the verification information, enrollment information and allows for manual verification.


Employee Speaker Verification

Employee, Greg

**Exception**

Visit contains a failed call (all attempts were below 70%). Check this box to authorize failed calls.

Characters: 28/512

[Type additional memos here]

Save
Exit

Verification: 09/30/2013 12:41

Description	Score	Listen
At Santrax My Voice Is My Password	19%	
At Santrax My Voice Is My Password	17%	
At Santrax My Voice Is My Password	19%	

Verification: 09/30/2013 13:13

Description	Score	Listen
At Santrax My Voice Is My Password	92%	

Enrollment: 09/30/2013 14:32

Enrolled by 12345678#

Description	Listen
At Santrax My Voice Is My Password	
At Santrax My Voice Is My Password	
At Santrax My Voice Is My Password	

Figure 7: Speaker Verification Popup Menu

- Verification

Each Verification section displays the date and time of the call, the spoken phrase used on the call, the verification score and a listen icon that, when clicked, plays the voice recorded during the call.

Verification: 09/30/2013 12:41		
Description	Score	Listen
At Santrax My Voice Is My Password	19%	
At Santrax My Voice Is My Password	17%	
At Santrax My Voice Is My Password	19%	

Verification: 09/30/2013 13:13		
Description	Score	Listen
At Santrax My Voice Is My Password	92%	

**Figure 8: Speaker Verification Popup Menu – Verification**

- Enrollment

The Enrollment section displays the date and time of enrollment, the supervisor who performed the enrollment, the spoken phrase used during enrollment and a listen icon that, when clicked, plays the voice recorded during the enrollment.

Enrollment: 09/30/2013 14:32	
Enrolled by 12345678#	
Description	Listen
At Santrax My Voice Is My Password	
At Santrax My Voice Is My Password	
At Santrax My Voice Is My Password	

**Figure 9: Speaker Verification Popup Menu – Enrollment**

- Exception

Use the Exceptions section at the top of the screen to manually authorize failed calls.

**Exception**

Visit contains a failed call (all attempts were below 70%). Check this box to authorize failed calls. Characters: 28/512

[Type additional memos here]

Figure 10: Speaker Verification Popup Menu – Exception

## How to Use the Listen Icon

Click any of the Speaker Verification Icons in the *View* column to access the Speaker Verification Popup menu for that visit

SPV	Client	Employee	View	Date	Sch Start	Sch End	Sch Hrs	Call Start	Call End	Act Hrs	Pay Hrs	Memo	M/C	C	Task	Exp	No Exp
	Client, Greg	Employee, Greg		Fri 01/27	14:00	14:30	00:30	13:59	14:31	00:32	00:30	✓		C	2		
	Client, Greg	Employee, Greg		Fri 01/27	15:00	15:30	00:30	14:59	15:29	00:30	00:30	✓	[AU]	C	2		
	Client, Greg	Employee, Greg		Fri 01/27	15:35	16:05	00:30	15:34	16:02	00:28	00:30	✓		C	2		
SPV	Client	Employee	View	Date	Sch Start	Sch End	Sch Hrs	Call Start	Call End	Act Hrs	Pay Hrs	Memo	M/C	C	Task	Exp	No Exp

Figure 11: Icons in the View Column

Clicking the Listen icon will play the voice recorded during the Santrax call.

Verification: 09/30/2013 13:13

Description	Score	Listen
At Santrax My Voice Is My Password	92%	

Figure 12: Speaker Verification Popup Menu

## How to Manually Verify the Visit

Click any of the Speaker Verification Icons in the *View* column to access the Speaker Verification Popup menu for that visit

SPV	Client	Employee	View	Date	Sch Start	Sch End	Sch Hrs	Call Start	Call End	Act Hrs	Pay Hrs	Memo	M/C	C	Task	Exp	No Exp
	Client, Greg	Employee, Greg		Fri 01/27	14:00	14:30	00:30	13:59	14:31	00:32	00:30	<input checked="" type="checkbox"/>		C	2		<input type="checkbox"/>
	Client, Greg	Employee, Greg		Fri 01/27	15:00	15:30	00:30	14:59	15:29	00:30	00:30	<input checked="" type="checkbox"/>	[AU]	C	2		<input type="checkbox"/>
	Client, Greg	Employee, Greg		Fri 01/27	15:35	16:05	00:30	15:34	16:02	00:28	00:30	<input checked="" type="checkbox"/>		C	2		<input type="checkbox"/>

Figure 13: Icons in the View Column

The Exceptions section is located at the top of the Speaker Verification popup menu. The Exceptions section is only available for visits with failed or manually verified calls.

**Exception**

Visit contains a failed call (all attempts were below 70%). Check this box to authorize failed calls. Characters: 28/512

[Type additional memos here]

Figure 14: Speaker Verification Popup Menu – Exception

Select or clear the checkbox to manually verify or undo the verification for the visit respectively.

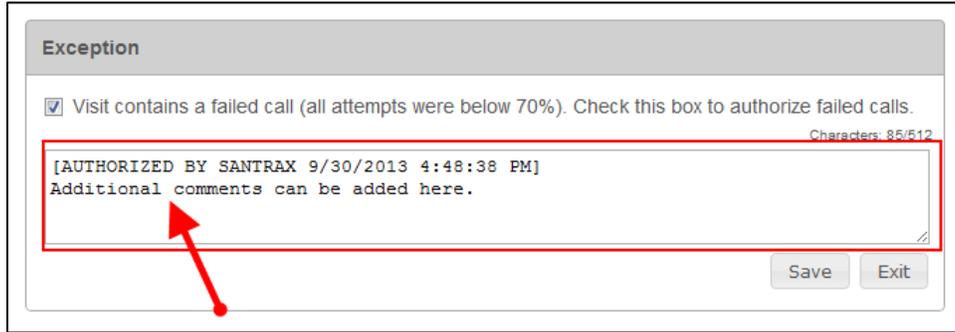
**Exception**

Visit contains a failed call (all attempts were below 70%). Check this box to authorize failed calls. Characters: 44/512

[AUTHORIZED BY SANTRAX 9/30/2013 4:48:38 PM]

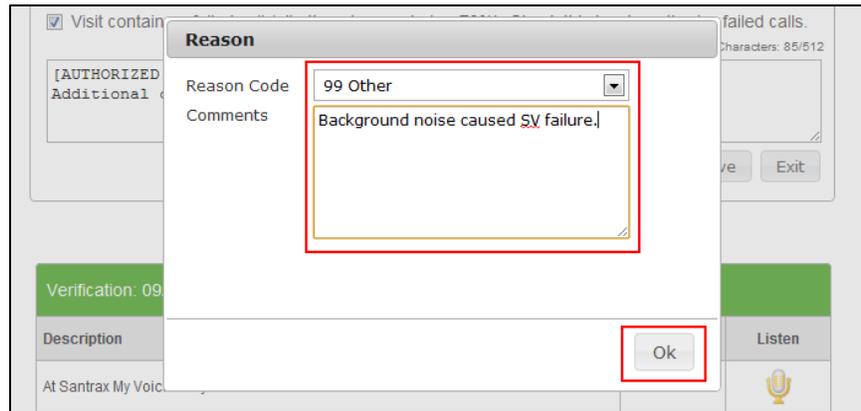
Figure 15: Speaker Verification Popup Menu – Manually Verify Visit

Santrax will automatically populate a free text visit memo stating the date and time of the authorization or un-authorization. Additional comments can be added in the text field. Information in this text field will be saved in the memo cell on the visit line.



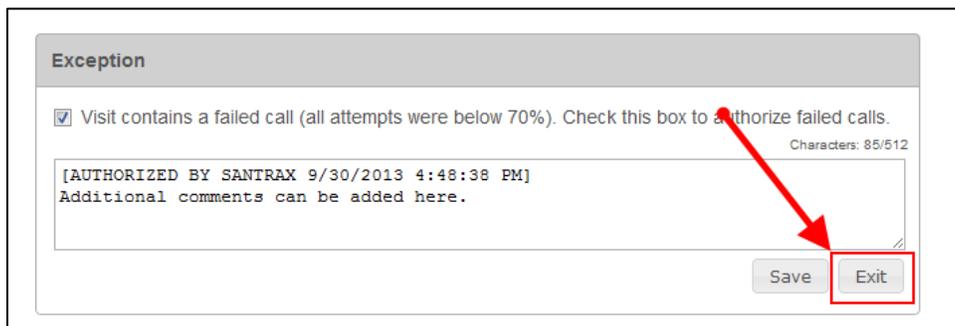
**Figure 16: Speaker Verification Popup Menu – Exception Comments**

Click on **Save** to save all changes. A reason code is required when manually verifying visits.



**Figure 17: Reason Code Popup Menu**

Click on **Exit** to close the popup menu.



**Figure 18: Speaker Verification Popup Menu**