

**CHAPTER 9**  
**COMPUTER VOICE STRESS ANALYSIS**  
**REVISED OCTOBER 2019**  
**TABLE OF CONTENTS**

<b><u>USE</u></b> .....	9-3
Authority .....	9-3
Use Other Than Preemployment .....	9-3
Computer Voice Stress Analysis Process.....	9-3
Investigative Tool Only .....	9-3
Follow-up Computer Voice Stress Analysis Examinations.....	9-3
<b><u>SELECTION, TRAINING, AND RECERTIFICATION</u></b> .....	9-4
Selection Criteria for Examiners .....	9-4
Initial Training .....	9-4
Departmental Removal from Computer Voice Stress Analysis Examiner Assignment .....	9-4
<b><u>RESPONSIBILITIES</u></b> .....	9-4
Cadet Hiring Unit .....	9-4
Division Applicant Investigation Unit Coordinator .....	9-5
Computer Voice Stress Analysis Examiner .....	9-5
Applicant Investigator .....	9-6
<b><u>PROCEDURES</u></b> .....	9-6
Initial Interview .....	9-6
Computer Voice Stress Analysis Requirement .....	9-7
Computer Voice Stress Analysis Process.....	9-7
Additional Computer Voice Stress Analysis Examinations .....	9-9
Second Review.....	9-9
<b><u>DOCUMENTATION</u></b> .....	9-10
Computer Voice Stress Analysis Examination Report .....	9-10
CHP 457, Truth Verification Release .....	9-10
Computer Voice Stress Analysis Questions and Voice Pattern Charts.....	9-10
CHP 458, Computer Voice Stress Analysis Log .....	9-10
<b><u>DISTRIBUTION AND RETENTION</u></b> .....	9-12
Computer Voice Stress Analysis Examination Report .....	9-12
CHP 458, Computer Voice Stress Analysis Log .....	9-12
Audio Tape Recording .....	9-12
<b><u>COMPUTER VOICE STRESS ANALYSIS EQUIPMENT AND MAINTENANCE</u></b> .....	9-12
Standard Equipment .....	9-12
Maintenance and Repair.....	9-12

THIS PAGE INTENTIONALLY LEFT BLANK

## CHAPTER 9

### COMPUTER VOICE STRESS ANALYSIS

#### 1. USE.

a. Authority. Departmental use of Computer Voice Stress Analysis (CVSA) shall be governed in part by the standards established under the authority of the Federal Polygraph Act of 1988 in compliance with the National Institute for Truth Verification (NITV) as outlined in the NITV Certified Examiners Course Manual. The NITV has developed and holds the copyright to the CVSA instrument. The manual is issued to each departmental CVSA examiner. Professional Training Section, Cadet Hiring Unit (CHU), also maintains a copy of the manual.

b. Use Other Than Preemployment. Use of CVSA truth verification was researched, approved, and implemented only for Cadet, California Highway Patrol (CHP), preemployment screening as a tool during the applicant investigation process. The following policy governs utilization of CVSA for cadet applicant investigations. Although it is recognized that CVSA may be useful in other investigative applications (e.g., suspect interrogations), use of CVSA outside the parameters outlined in this chapter must be authorized by the Office of the Commissioner.

c. Computer Voice Stress Analysis Process. The CVSA process shall be administered to all Cadet, CHP, candidates as outlined in this chapter, following the Initial Interview phase of the applicant investigation.

d. Investigative Tool Only. The CVSA process shall be used only as an investigative tool to facilitate the most efficient and comprehensive screening of candidates for the position of Cadet, CHP. Candidates shall not be withheld from certification based solely on the fact that a deceptive response was detected by CVSA. Deceptive responses must be investigated and determined to be disqualifying issues by an applicant investigator before the issue may be considered in determining a candidate's suitability for hire. A candidate's subsequent admission and/or confession to a deceptive response detected by CVSA will sufficiently validate the deceptive response without the need for further investigation. The admission and/or confession, in and of itself, to the deceptive response may then be considered in determining the candidate's employability.

e. Follow-up Computer Voice Stress Analysis Examinations. Additional examinations may be administered to resolve specific issues that may arise during the initial CVSA process. Additional examinations may also be administered to resolve specific issues that may arise during the remaining portions of the investigation (see paragraph 4.d.).

## 2. SELECTION, TRAINING, AND RECERTIFICATION.

a. Selection Criteria for Examiners. Only current departmental applicant investigators or Applicant Investigation Unit (AIU) coordinators may be selected to be trained as CVSA examiners. Prospective examiners will be assigned only as examiner vacancies occur within the respective Divisions. The CHU will coordinate the scheduling of training for prospective departmental examiners according to availability and location of training courses. In order to fully utilize the training and experience necessary to effectively administer the CVSA process, personnel selected to receive CVSA Examiner Certification training should be expected to serve in the assignment for a minimum of two years. It is recommended that all prospective departmental CVSA examiners be advised of the tenure expectation of the assignment.

b. Initial Training. Initial training for certification in CVSA examinations is provided by the NITV. The NITV certifies departmental examiners upon successful completion of a 48-hour examiners course. Departmental CVSA examinations shall be administered only by departmental employees who have been certified in the CVSA process.

### c. Departmental Removal from Computer Voice Stress Analysis Examiner Assignment.

(1) Voluntary Removal. Upon written request by a departmental CVSA examiner, they may be removed from examiner duties with the concurrence of the Division commander.

(2) Involuntary Removal. The Department may remove an employee from a CVSA examiner assignment for the following reasons:

(a) Failure to comply with departmental policy and procedures concerning the use of CVSA.

(b) Any circumstance wherein the removal of an examiner's certification is deemed in the best interest of the Department.

## 3. RESPONSIBILITIES.

a. Cadet Hiring Unit. The CHU shall be responsible for statewide administration of the Department's CVSA program. The CHU's responsibilities include:

(1) Coordination and oversight of the Department's CVSA Program.

(2) Maintaining departmental liaison and coordinating departmental representation with:

- (a) California Highway Patrol CVSA Examiners.
- (b) Division Applicant Investigation Units.
- (c) National Institute for Truth Verification.

(3) Conducting final review of all reports relating to the CVSA process to ensure statewide uniformity and compliance with departmental policy and procedures.

(4) Retaining original CVSA Examination Reports, including the CHP 457, Truth Verification Release, the CVSA questions, and the voice pattern charts.

(5) Coordinating with NITV for initial training for all departmental CVSA examiners.

b. Division Applicant Investigation Unit Coordinator. The Division AIU coordinator will assume responsibility as the coordinator for the CVSA process conducted within their respective Division. The coordinator's responsibilities include:

- (1) Ensuring the CVSA process is conducted in strict compliance with departmental policy and procedures.
- (2) Coordinating all initial training of Division personnel with CHU.
- (3) Maintaining the Division's quarterly CHP 458, Computer Voice Stress Analysis (CVSA) Log.
- (4) Whenever possible, ensuring that applicant investigators assigned as CVSA examiners are not issued applicant investigation cases of candidates for whom the investigators also conducted the CVSA process.
- (5) Coordinating the security and maintenance of the CVSA instrument.

c. Computer Voice Stress Analysis Examiner. The examiner's responsibilities include:

- (1) Properly administering the CVSA process in strict compliance with departmental policy and procedures.
- (2) Completing a CVSA Examination Report no later than 48 hours following each CVSA process.

- (3) Maintaining a written log of all administrations of the CVSA process, utilizing the CHP 458.
  - (4) Transmitting the original CVSA Examination Report, including the CHP 457, the CVSA questions, and the voice pattern charts, to the appropriate applicant investigator for inclusion into the candidate's applicant investigation file.
  - (5) Retaining one copy of all CVSA Examination Reports, including the CHP 457, the CVSA questions, and the voice pattern charts.
  - (6) Retaining one copy of all CHP 458s.
  - (7) Forwarding the original CHP 458, at the end of each calendar quarter to the Division AIU coordinator.
  - (8) Avoiding administration of examinations to individuals who may present a conflict of interest with the examiner (i.e., relatives, friends or others with whom the examiner may have had a relationship).
- d. Applicant Investigator. The applicant investigator's responsibilities include:
- (1) Providing the CVSA examiner with a candidate's responses to the Background Investigation Questionnaire (BIQ).
  - (2) Scheduling a candidate for the CVSA process with the CVSA examiner.
  - (3) Documenting any withholds from certification that occur as a result of derogatory issues disclosed during the CVSA process.

#### 4. PROCEDURES.

a. Initial Interview. The first phase of the applicant investigation is conducted by the candidate's assigned applicant investigator. The applicant investigator will contact the candidate and schedule an Initial Interview. During the Initial Interview, the applicant investigator shall review the BIQ with the candidate. A written response to any potentially disqualifying issue shall be obtained from the candidate. After the Initial Interview, the applicant investigator shall cross validate the disclosed information with other preemployment documents and assess the candidate's suitability for employment. If warranted, the applicant investigator may terminate the investigation based on selective derogatory information. If, however, disqualifying information is not discovered, the applicant investigator shall refer the candidate to the CVSA process. It is the responsibility of the applicant investigator to ensure that the candidate is scheduled for the CVSA process. When

coordinating with the CVSA examiner, the applicant investigator shall provide the BIQ to the CVSA examiner to review during the Preexamination Discussion step of the CVSA process.

b. Computer Voice Stress Analysis Requirement. The CVSA process shall be administered to all candidates for the position of Cadet, CHP, following the Initial Interview portion of the applicant investigation process. Failure or refusal by a candidate to submit to the CVSA process shall result in the candidate's withhold from certification.

c. Computer Voice Stress Analysis Process. The CVSA process is comprised of three steps: the Preexamination Discussion, the Examination, and the Postexamination Discussion. The CVSA process shall be recorded on audio tape and administered as follows:

(1) Preexamination Discussion.

(a) Prior to the Preexamination Discussion, the examiner shall present to the candidate the CHP 457 for their signature. The audio tape recording shall commence at the beginning of this step with a brief introduction by the CVSA examiner, a notification to the candidate that the CVSA process is being recorded on audio tape, and an indication of the time that the recording was initiated. The CVSA examiner shall then review the candidate's responses to the BIQ. The BIQ is a comprehensive inquiry in which candidates respond to a series of relevant and detailed questions pertaining to their background and behavior. The area of inquiry covers virtually every aspect of an individual's background that would have the potential of yielding disqualifying issues.

(b) If an issue arises during the Preexamination Discussion which would render the candidate unsuitable for employment, the examiner terminates the CVSA process and so advises the candidate. The examiner shall only advise the candidate that a significant issue was discovered which will be provided to the assigned applicant investigator for their review and action. The examiner shall then notify the assigned applicant investigator who will then make the final recommendation as to the candidate's suitability for hire and so advise the candidate.

(2) Examination.

(a) Following the completion of the Preexamination Discussion, the examination will take place. During this step, the candidate is asked questions relating to their personal history. These questions are derived from the BIQ and are asked of every candidate. It is imperative that the

CVSA process be administered consistently to all candidates; therefore, all examinations shall be conducted using only the CVSA questions. The CVSA questions shall be reviewed with the candidate prior to their actual administration. This review is necessary to alleviate the stress that is inherent with the CVSA process. Subsequent to this review, the administration shall occur. During the administration, the candidate's responses to the CVSA questions are recorded into the CVSA instrument. The CVSA instrument produces a voice pattern chart that depicts frequency modulation in a candidate's voice as they respond to the questions. Two administrations shall be conducted. The first administration is conducted to further reduce stress and provide an opportunity for the CVSA examiner to check for proper recording control. The second administration is conducted to provide the CVSA examiner with a voice pattern chart that is suitable for analysis. Even a candidate who is honest may experience situational stress on the first administration. An honest candidate's overall stress will normally decrease on the second administration. Conversely, a dishonest candidate's overall stress will normally increase on the second administration. Therefore, to ensure the most accurate results, two administrations shall always be conducted.

(b) The CVSA examiner shall not alter nor augment the CVSA questions in any way with the exception of the following: If, during the Preexamination Discussion, the candidate admits to a derogatory issue, the CVSA examiner must modify the question to compensate for the disclosed information. The modification is necessary to enable the CVSA instrument to screen for any additional deceptive response. For example, number four of the CVSA questions asks, "Have you ever received a reprimand, either verbal or written, at any place of employment?" In this example, during the Preexamination Discussion, if the candidate admits to receiving one written reprimand, the examiner would then ask the question during the administration as follows: "Other than what you have told me, have you ever received a reprimand, either verbal or written, at any place of employment?" This question formulation allows the CVSA examiner to continue to screen for additional deception and/or derogatory information from a candidate.

(3) Postexamination Discussion. Following the examination, the CVSA examiner shall discuss the results with the candidate. The audio tape recording shall continue through this step to the conclusion of the Postexamination Discussion. The results shall then be documented in the CVSA Examination Report which will always include the CHP 457, the CVSA questions, and the voice pattern charts.

(a) No Deception Indicated. If the examination revealed no deception or potentially disqualifying issues, the candidate has completed the CVSA process. The CVSA examiner will advise the candidate that no deception was detected but should also emphasize that no conclusion will be drawn solely from the examination. The examiner shall document the findings utilizing the CVSA Examination Report and provide the original report to the assigned applicant investigator for inclusion in the candidate's applicant investigation file.

(b) Deception Indicated, Candidate Admits to Deception. Should the examination reveal deceptive responses or potentially disqualifying issues, the examiner will discuss the issues with the candidate. Should the candidate admit deception, the admission would then become a disclosed derogatory issue. The examiner will then document the findings utilizing the CVSA Examination Report and forward the original report to the assigned applicant investigator. The applicant investigator shall review the report and make a determination as to the candidate's suitability for employment and so advise the candidate.

(c) Deception Indicated, Candidate Denies Deception. In the event deceptive responses are detected and, during the Postexamination Discussion, the examiner is unable to gain an admission from the candidate, the examiner shall document the indicated deception utilizing the CVSA Examination Report. The original report shall be provided to the applicant investigator for inclusion into the candidate's applicant investigation file. The applicant investigator should focus the applicant investigation on the issues drawing the deceptive response and should, whenever possible, attempt to resolve those issues prior to commencing other areas of the investigation.

d. Additional Computer Voice Stress Analysis Examinations. In the event that issues arise during the course of the applicant investigation for which CVSA truth verification testing would be useful, additional CVSA examinations may be administered in an attempt to resolve those issues. The assigned applicant investigator shall coordinate such examinations with the Division AIU coordinator. Upon completion of the examination, the examiner shall document their findings utilizing the CVSA Examination Report, and then provide the original report to the assigned investigator for inclusion into the candidate's applicant investigation file.

e. Second Review. In all cases in which deception is indicated but the candidate denies deception, CVSA examiners shall ensure that the CVSA examination results are reviewed and interpreted by another CVSA examiner. This second review is necessary in order to cross validate the original examiner's conclusion. In most cases, the corroborating examiner should be one of the other examiners assigned

to the same Division. If necessary, however, the examination results may also be faxed to CHU for second review interpretations. The CVSA examiner shall include in the CVSA Examination Report the name of the second review examiner and the date the second review was conducted.

5. DOCUMENTATION.

a. Computer Voice Stress Analysis Examination Report. A written report shall be prepared each time an examination is administered. The report shall be provided to the assigned applicant investigator describing the results of the CVSA process. The following information is required:

(1) Candidate. Write the candidate's name as it appears on preemployment documents.

(2) Date. Write the date of the examination.

(3) Time. Write the time the CVSA process starts.

(4) Social Security Number. Write the candidate's social security number.

(5) Location. Write the location where the CVSA process was conducted.

(6) Examiner. Write the name and the CHP identification number of the CVSA examiner.

(7) Summary. The CVSA examiner should initially explain the examination results and whether or not deception was indicated. Additionally, results of the pretest discussion shall be documented. Questions showing deception should be profiled to provide to the applicant investigator a clear description of where deception was evident. Any admissions and/or confessions which were disclosed during the Postexamination Discussion should also be documented. Additionally, for those cases requiring a second level of review, the name of the CVSA examiner that provided the "second review" shall be included with the date of review.

b. CHP 457, Truth Verification Release. The signed and dated CHP 457 shall be attached to the CVSA Examination Report.

c. Computer Voice Stress Analysis Questions and Voice Pattern Charts. The CVSA instrument produces a voice pattern chart for analysis. The questions are also produced for reference. This information shall be attached to the CVSA Examination Report.

d. CHP 458, Computer Voice Stress Analysis (CVSA) Log. The Division AIU coordinator shall maintain data relating to CVSA. The CHP 458 has been developed to facilitate the gathering of pertinent data related to administering the CVSA process. The CHP 458s should be maintained by the Division AIU coordinator for a period of 24 months. The following instructions for the completion of the CHP 458 are provided to ensure statewide consistency in reporting CVSA information.

- (1) Computer Voice Stress Analysis Examiner. Write the CVSA examiner's full name.
- (2) Identification Number. Write the CHP identification number of the CVSA examiner.
- (3) Year. Enter the current year.
- (4) Calendar Quarter. Check the appropriate box:
  - (a) 1 - January-March
  - (b) 2 - April-June
  - (c) 3 - July-September
  - (d) 4 - October-December
- (5) Computer Voice Stress Analysis Test Number. The entries shall be listed in sequential order beginning with the first CVSA process administered each calendar quarter, which would be listed as, "1." During any quarter in which the initial log is completed, an additional log shall be attached and numbered consecutively. The numbering of administrations shall continue in sequential order using as many logs as necessary until the end of each calendar quarter.
- (6) Date. Write the date of the administrations.
- (7) Candidate. Write the candidate's name as it appears on preemployment documents.
- (8) Social Security Number. Write the candidate's social security number.
- (9) Exam Code. Write the examination code listed on the candidate's applicant investigation case file.
- (10) No Deception Indicated. The examiner will place their initials in this box if the results of the CVSA process did not indicate a deceptive response.

(11) Deception Indicated. The examiner will place their initials in the box that best describes the candidate's response to the deceptive results.

(12) Duration of Computer Voice Stress Analysis Process. The amount of time spent on the CVSA process starting from the Preexamination Discussion through the Postexamination Discussion should be documented in this section.

(13) Second Review Completed. The examiner will check this box if a second review was conducted.

## 6. DISTRIBUTION AND RETENTION.

a. Computer Voice Stress Analysis Examination Report. The completed CVSA Examination Report, with the CHP 457, the CVSA questions, and the voice pattern charts, will become part of the applicant investigation report and will be provided to the applicant investigator for inclusion in the candidate's applicant investigation file. A complete copy of the CVSA Examination Report shall be retained by the examiner for each CVSA process administered for a period of two years from the date of the administration.

b. CHP 458, Computer Voice Stress Analysis (CVSA) Log. At the completion of a calendar quarter, each CVSA examiner shall forward the original CHP 458 to their respective Division AIU coordinator for review. The Division AIU coordinator is responsible for compiling and maintaining all original CHP 458s. One copy of the CHP 458 shall be retained by the examiner for a period of two years from the date of the last CVSA process which is listed on each report.

c. Audio Tape Recording. The audio tape recording shall be retained at the Division level for a period of two years from the date of the CVSA process.

## 7. COMPUTER VOICE STRESS ANALYSIS EQUIPMENT AND MAINTENANCE.

a. Standard Equipment. The CVSA equipment includes the following items:

(1) Dell Latitude D620 Notebook computer with NITV CVSA software installed.

(2) Computer security key to prevent unauthorized duplication of the NITV CVSA software.

(3) Two external lapel microphones.

(4) Power cord.

b. Maintenance and Repair. The Division AIU coordinator will be responsible for care and security of their Division's CVSA instrument. Individual examiners are responsible for reporting problems encountered with CVSA instruments. Should CVSA examiners experience problems, they shall report the problem without delay to their respective Division AIU coordinators. The coordinator, in turn, shall contact NITV Technical Support at (561) 798-6280 in an effort to resolve the problem. Should the CVSA instrument require repair or replacement, coordinators shall contact the CHU to arrange for a temporary replacement instrument and the repair of their instrument.

THIS PAGE INTENTIONALLY LEFT BLANK