California State Auditor

March 2013

California Department of Transportation

Caltrans Employees Engaged in Inexcusable Neglect of Duty, Received Overpayment for Overtime, Falsified Test Data, and Misappropriated State Property

Report I2009-0640

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California State Auditor

Elaine M. Howle State Auditor
Doug Cordiner Chief Deputy

March 28, 2013 I2009-0640

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

Pursuant to the California Whistleblower Protection Act, the California State Auditor presents this investigative report concerning improper inexcusable neglect of duty, overpayment for overtime, testing data falsification, and misappropriation of state property.

This report concludes that a supervisor neglected his duty to supervise two technicians, which facilitated the technicians being paid for work they did not perform at an estimated cost of $13,788 in overpayments. One of the technicians, as determined by the California Department of Transportation (Caltrans) and two federal agencies, falsified concrete pile testing data for at least three transportation projects. A subsequent review by Caltrans identified eight additional incidents of data falsification. The supervisor also misappropriated Caltrans property with assistance from the technicians and other subordinate employees.

Respectfully submitted,

Elaine M. Howle

ELAINE M. HOWLE, CPA
State Auditor

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Contents

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Investigative Results

Results in Brief

Pursuant to the California Whistleblower Protection Act (Whistleblower Act, found at Government Code section 8547 et seq.), the California State Auditor (state auditor) presents this report concerning an investigation conducted at the California Department of Transportation (Caltrans). The Whistleblower Act authorizes the state auditor to investigate and report on improper governmental activities by state agencies and employees. Under the Whistleblower Act, an improper governmental activity, as defined by Government Code section 8547.2, subdivision (c), includes any action by a state agency, or by a state employee in connection with his or her employment, that violates a state or federal law; violates an executive order of the Governor, a California Rule of Court, or a policy or procedure mandated by the *State Administrative Manual* or *State Contracting Manual*; is economically wasteful; or involves gross misconduct, incompetence, or inefficiency.

This report concludes that a supervisor neglected his duty to supervise two transportation engineering technicians (technicians), which facilitated the technicians being paid for work they did not perform, at an estimated cost of $13,788 in overpayments. One of the technicians, as determined by Caltrans and two federal agencies, falsified concrete pile testing data for at least three transportation projects. A subsequent review by Caltrans identified eight additional incidents of data falsification. The supervisor also misappropriated Caltrans property with assistance from the technicians and other subordinate employees.

Investigative Highlights . . .

Our investigation at the California Department of Transportation (Caltrans) substantiated the following:

- *A supervisor neglected his duty to supervise two technicians, which facilitated their being able to get paid for work they did not perform.*
- *Two technicians improperly claimed overtime and differential pay for work not performed, costing the State an estimated $13,788 in overpayments.*
- *Caltrans employees engaged in 11 incidents of data falsification—10 of the incidents involved one of the technicians, while the remaining incident involved an engineer who reviewed testing data collected by that technician.*
- *Caltrans could not identify the engineer who falsified the data.*
- *The supervisor improperly used Caltrans property by taking it to land that he owned with help from two technicians and other subordinate employees.*

Background

As part of executing its responsibility to design, build, operate, and maintain California's highway system, Caltrans operates a Foundation Testing Branch within its division of engineering services to perform foundation testing for transportation structures, including freeway overpasses and bridges. Caltrans employs technicians in the branch to conduct the testing, which includes gamma gamma logging and pile load testing, among other methods of testing, to analyze the strength and durability of the piles that are used to provide a deep foundation for the support of bridges and other transportation structures. Gamma gamma logging constitutes approximately 80 percent of the work of the Foundation Testing Branch, with other methods of testing, including pile load testing, constituting the remainder of the branch's work. Caltrans also employs engineers to interpret the data generated by the testing.

Gamma gamma logging uses a probe to detect anomalies or inconsistencies in the density of the concrete used to form a pile that will support a structure. A technician performs gamma gamma logging by using gear loaded into a specially equipped van that the technician drives to the construction site where piles are being installed. Each pile that is installed at a location where water is present in the ground is required to have vertical testing tubes cast into the concrete forming the pile, spaced an equal distance apart, with one tube for every 12 inches of the pile's diameter. The technician attaches a pulley device to the top of a tube and attaches a radiation source to one end of the probe and a cable to the other end of the probe. The cable is connected to a winch located in the van. With the pulley device guiding the cable, the technician uses the winch to lower and then raise the probe through the tube at a steady pace. As it moves through the tube, the probe emits gamma radiation particles into the concrete surrounding the tube and collects data regarding the density of the concrete in the pile as measured by the manner in which the gamma particles penetrate the concrete and deflect back to the probe. The probe sends this data to a nearby laptop computer to which the probe is linked. The technician repeats this process for every tube in every pile being installed. The laptop computer stores the data it receives in a raw data file and in a log ASCII data file created for each tube.[1] After completing the gamma gamma logging testing at a site, the technician submits the log ASCII files for each of the piles tested to a Caltrans engineer to evaluate the testing results. Figure 1 shows a gamma gamma logging test being performed at a construction site.

The Foundation Testing Branch is expected to perform tests on its gamma gamma logging equipment on a regular basis to ensure that the equipment is recording data accurately and performing properly. At least annually, a branch technician performs a calibration test on the equipment to ensure that it accurately records the data it collects. In addition, prior to undertaking a testing assignment, each technician assigned to perform testing at a construction site is expected to verify that the gamma gamma logging equipment he or she will be using is operating properly. To do this, the technician performs a functionality test using the equipment to test a concrete block of known density (a concrete reference block). The branch establishes the density of the concrete reference blocks that it uses by performing qualification tests to verify that the blocks are of a standard density.

Pile load testing uses pressure exerted by a hydraulic jack to measure whether the design of a concrete or steel pile will withstand the load it is intended to hold once the structure it

[1] ASCII is an acronym that stands for American Standard Code for Information Interchange. An ASCII file is a common text file in which each alphabetic, numeric, and special character is represented by a number.

Figure 1
Example of Gamma Gamma Logging at a Construction Site

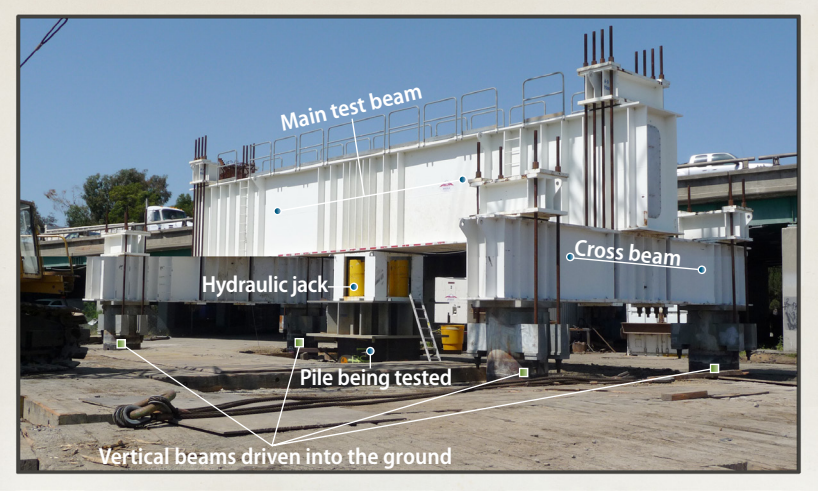
Source: California Department of Transportation, Foundation Testing Branch.

supports is completed and in use. Pile load testing is not performed for all construction projects, but only when an engineer for a project wants confirmation that the design of the piles used in a project will have the load capacity that is necessary when put in place at the construction site. Since the condition of the soil where a pile is installed can affect the amount of load the pile can withstand, the testing must be performed at the construction site.

To perform this test, a team of technicians and an engineer attach digital displacement gauges to the pile being tested, place hydraulic jacks atop the pile, and center a large steel beam, called a "main test beam," over the jack. The main test beam is attached at each end to a cross beam that is secured to vertical beams that are drilled or driven into the ground. When a technician activates the hydraulic jack, the jack applies incrementally increasing pressure on the test pile, simulating an incremental increase in the amount of load being placed on the pile that will be installed at the site to support the structure being built. As the amount of load increases, the gauges attached to the test pile collect data about the pile's movement at each level of load and transmit this data to a nearby computer. The technician continues to increase the amount of load until the test pile fails, as evidenced by the gauge revealing that the pile is displaying too much movement to be considered stable at

that particular amount of load. This establishes the maximum load capacity of the pile that will be installed at the construction site. After the test is concluded, the data collected by the technicians is analyzed by a Caltrans engineer to determine whether the design of the pile is adequate to provide the support needed for the structure being built. If the testing reveals that a pile cannot withstand the intended load, the pile is redesigned. Figure 2 depicts a pile load test being conducted.

Figure 2
Example of a Pile Load Test at a Construction Site



Source: California Department of Transportation, Foundation Testing Branch.

Pile load testing can involve physically demanding activity. As a result, the collective bargaining agreement between the State and the employees of bargaining unit 11, which includes Caltrans technicians, provides that a technician performing this test receives increased compensation (called a "pay differential") of $1.25 for every hour that he or she is engaged in the pile load testing. To qualify for the differential, a technician must be assigned to pile load testing duties at a specific site, and the pile load testing equipment must be en route to, en route from, or at the site.

Gamma gamma logging and pile load testing are essential to ensuring that a particular transportation structure is reliable and safe for extended use. By checking for anomalies or inconsistencies in the concrete that forms the piles used in a construction project, along with other quality assurance measures, gamma gamma logging helps to ensure that the piles are not defective and therefore will provide proper support for a structure over time. By establishing the load capacity of a pile designed for use

in a construction project, pile load testing helps to ensure that the piles used in a transportation structure will be strong enough to support the structure safely. Because circumstances often require that a testing project be completed within a short amount of time, technicians performing gamma gamma logging and pile load testing commonly are required to work overtime to complete the testing in a timely manner.

Both pile load testing and gamma gamma logging tests are very technical in nature, involve the use of special testing equipment, and require travel to a construction site.

Both tests are very technical in nature, involve the use of special testing equipment, and require travel to a construction site. Thus, whenever gamma gamma logging or pile load testing has been conducted, many documents should exist to confirm that the testing was performed. When a technician performs gamma gamma logging, the following documents typically are generated for review to ensure that the test has been performed properly: a daily field report, a test setup sheet, a nuclear gauge checkout log, gauge functionality test result, and data files in two different formats for every tube tested. When a technician performs pile load testing, the documents typically generated for review include a pile load testing setup sheet, a daily field report, an engineer report, pictures of the testing, and time-stamped raw data files. In addition, Caltrans' routine procedures require project work folders and travel expense claims to be generated for either test.

In performing the previously described testing and all other aspects of their employment, state employees are required to behave honestly. Government Code section 19572, subdivision (f) declares that any act of dishonesty by a state employee constitutes grounds for discipline. Moreover, United States Code, title 18, section 1020 expressly prohibits any federal or state employee from making false statements or representations regarding the materials used or work performed in a highway construction project.

To protect state resources, every state agency is required to supervise its employees in a manner that prevents the unnecessary expenditure of state funds. California Code of Regulations, title 2, section 599.665 provides that state agencies must keep complete and accurate time and attendance records for all of their employees. Further, California Code of Regulations, title 2, section 599.702 requires that for an agency to compensate an employee for overtime, the overtime must be authorized in advance, except in an emergency. Consistent with these statutory requirements, the *State Administrative Manual* provides at section 8540 that as a general practice, compensation for overtime should be based on prior written approval signed by a designated supervisor.

To ensure that state employees receive proper supervision, state supervisory employees must fulfill their duties adequately. Inexcusable neglect of duty by a state employee is prohibited misconduct

that constitutes grounds for discipline under Government Code section 19572, subdivision (d). In a precedential decision, the State Personnel Board defined "inexcusable neglect of duty" as "an intentional or grossly negligent failure to exercise due diligence in the performance of a known official duty."[2] A supervisor has a duty to ensure that the time reports submitted by his or her subordinates are accurate and that their overtime requests are reasonable.

In addition, Government Code section 8314, subdivision (a) prohibits any state employee from misappropriating public resources for a personal purpose. When the misappropriation amounts to the taking and carrying away of state resources for personal use with the intent to consume them or keep them permanently, it constitutes theft by embezzlement in violation of Penal Code section 504.

After we received information in early 2009 that certain Caltrans technicians might be receiving overtime and differential payments for work not performed, we asked Caltrans in April 2009 to assist us with an investigation by reviewing all 2008 timesheets for these technicians. After we made this request, and in response to a complaint that it received in 2009, Caltrans and two federal agencies—the Office of the Inspector General for the United States Department of Transportation (Inspector General) and the Federal Highway Administration (Highway Administration)—initiated related investigations into the falsification of testing data and misappropriation of state property by Caltrans employees in the Foundation Testing Branch.

When we received the results of the review and examined Caltrans' methodology for conducting the review, we found the review to be inadequate.

Caltrans did not provide us with the results of its review of the technicians' timesheets until September 2009, despite our repeated requests for a quicker response. However, when we received the results of the review and examined Caltrans' methodology for conducting the review, we found the review to be inadequate, as Caltrans did not explain how the technicians could have worked so much overtime on days when they were not assigned to perform testing in the field. We therefore asked Caltrans in January 2010 to explain why the technicians' overtime hours were not associated with field testing and to review supporting documents to ensure the technicians worked all of the hours they claimed.

In February 2010 Caltrans responded that the overtime hours claimed by the technicians were incurred while performing tasks associated with conducting tests in the field. However, when we compared the technicians' travel claims to their overtime and pile

[2] Jack Tolchin (1996) SPB Dec. No. 96-04, page 11, citing *Gubser v. Dept. of Employment* (1969) 271 Cal. App.2d 240, 242.

load testing hours, we found that most of the overtime and pile load testing hours claimed were not associated with field testing. Instead, the technicians claimed overtime and pile load testing hours regularly, without regard to their assignments. We posed additional questions to Caltrans in March 2010, which prompted it to conduct interviews. From March 2010 through October 2011, we repeatedly asked Caltrans to provide us with updates on the status of its work. Caltrans submitted its final report to us in October 2011. After reviewing its report, however, we found that we needed to conduct additional interviews and perform additional analyses to validate Caltrans' findings. We also needed to take into account the results of the investigatory work being performed by the federal agencies that were drawn into examining the activities of the technicians after they learned that one of the technicians had falsified the results of some of the gamma gamma logging tests that he had performed.

Facts and Analysis

The previously described investigative work revealed that a supervisor neglected his duty to supervise two technicians, which facilitated their being able to get paid for work they did not perform. In 2008 technicians A and B improperly claimed overtime and differential pay for work not performed, costing the State an estimated $13,788 in overpayments to the technicians. In addition, Caltrans employees engaged in 11 incidents of data falsification. Ten of the incidents involved Technician A, while the remaining incident involved an engineer who reviewed testing data collected by Technician A. However, Caltrans could not identify the engineer who falsified the data. The supervisor also made improper use of Caltrans property by taking it to land that he owned near Susanville, California, with help from the two technicians and other subordinate employees.

The Technicians' Supervisor Neglected His Duty to Supervise the Technicians, Thus Allowing Them to Be Paid for Work Not Performed

Our investigation found that a supervisor substantially neglected his duty to supervise two technicians in the Foundation Testing Branch. In particular, the supervisor neither required the technicians to obtain preapproval for overtime nor reviewed records readily available to him to confirm that the technicians performed the work they claimed. As a result, the supervisor approved 267 hours of overtime claimed by the technicians even though there was no evidence to demonstrate that they actually worked the overtime. Similarly, he approved the technicians' claims of performing 1,373 hours of pile load testing, for which they received differential pay, even though there was no evidence to verify that they

performed this work during those hours. In fact, in some instances, documents were available to indicate that they were performing another kind of work entirely.

Under California Code of Regulations, title 2, section 599.702, overtime requests were to be approved in advance by the supervisor. At a weekly staff meeting held every Friday, the supervisor routinely instructed his employees to submit requests for authorization to work overtime. Technicians A and B submitted "blanket" overtime requests any time they believed an assignment was likely, regardless of the actual occurrence. However, the supervisor did not sign or date any of the overtime requests submitted by the two technicians in 2008. Therefore, because the overtime was only requested and not approved, this process did not fulfill the legal requirement.

Given the nature of the technicians' fieldwork assignments, which required them to check out specific testing equipment and produce a work product each time they conducted fieldwork, the supervisor had sufficient records available to confirm whether the technicians worked the hours they claimed. The supervisor asserted that he regularly looked at the overtime claimed by each technician to determine whether the overtime claimed for various projects appeared credible. However, had the supervisor performed even a cursory comparison between the two technicians' time reports and available testing documents, he would have discovered that both technicians were claiming overtime for work that did not involve testing, which generally is the only justification for technicians to work overtime. He also would have discovered that the technicians were claiming differential pay for hours they did not perform work that entitled them to receive the differential. At a minimum, the supervisor should have questioned the overtime and pay differential hours claimed when no corresponding test results or record of using testing equipment existed.

The frequency of the pile load testing hours claimed should have raised concerns for the supervisor, as this kind of testing generally constitutes only about 20 percent of the branch's work.

The frequency of the pile load testing hours claimed should have raised concerns for the supervisor, as this kind of testing generally constitutes only about 20 percent of the branch's work. For example, Technician A reported pile load testing during four weeks in January 2008. Such an unusually high amount of pile load testing in a single month, as reported by the technician, should have prompted the supervisor to take a closer look at the accuracy of the claim. If he had done so, he would have found that Technician A actually was working on gamma gamma logging during one of the four weeks he claimed to be working on pile load testing. Further, the supervisor would have found no evidence of pile load testing for any of the remaining weeks that Technician A claimed to be performing such testing in January 2008. Similarly, Technician B regularly claimed pile load testing hours that exceeded the amount of this testing that generally is performed, which should have

prompted the supervisor to examine the accuracy of the pile load testing hours that Technician B claimed. For instance, Technician B claimed to be working on pile load testing for the majority of the month of September 2008. Had the supervisor performed a closer review, he would have found no evidence of any pile load testing work performed by Technician B during that month. Even in those rare instances when the technicians legitimately could have worked overtime without conducting tests, the supervisor should have obtained and reviewed documentation of the overtime work the technicians claimed they were performing before approving their time reports, in order to comply with Caltrans' overtime policy.

Through his failure to exercise due diligence in monitoring the overtime work performed by the technicians under his supervision and confirming the accuracy of the overtime they claimed on their time reports before approving them, the supervisor inexcusably neglected a duty of his position in violation of Government Code section 19572, subdivision (d).

Two Technicians Improperly Claimed Overtime and Differential Pay for Work Not Performed

As technicians assigned to the Foundation Testing Branch, technicians A and B were responsible for testing piles used in transportation construction projects throughout California. Both worked under the same supervisor, who supervised all of the technicians in the branch. They began working in the branch in 2003 and 2002, respectively, and were authorized to perform gamma gamma logging, pile load testing, and other methods of pile testing as directed by their supervisor. However, as described in greater detail earlier in this report, how the technicians reported spending their work hours and what hours they actually worked received little oversight from their supervisor. When the technicians reported working hundreds of hours of overtime in 2008, we examined whether there was evidence showing they had worked the hours they claimed.

When the technicians reported working hundreds of hours of overtime in 2008, we examined whether there was evidence showing they had worked the hours they claimed.

We found that in 2008 the two technicians claimed a total of 267 hours of overtime work they did not perform and received $12,072 in overtime pay to which they were not entitled. Technician A falsely claimed 138 hours of overtime work, consisting of 115 hours claimed as testing work and 23 hours claimed as nontesting work, for which he was paid $6,384. Technician B falsely claimed 129 hours of overtime work, consisting of 111 hours claimed as testing work and 18 hours claimed as nontesting work, for which he was paid $5,688. We determined that neither technician performed the testing work because during the hours they claimed to be working overtime doing

testing, there was no record of the equipment needed for such testing having been checked out and no activity records to indicate that testing work was performed during that time.

We found that in 2008 the two technicians falsely claimed they performed a total of 1,373 hours of pile load testing work and received $1,716 in differential pay to which they were not entitled.

We also found that in 2008 the two technicians falsely claimed they performed a total of 1,373 hours of pile load testing work and received $1,716 in differential pay to which they were not entitled. Technician A falsely claimed 360 hours of pile load testing work, for which he was paid $450 in differential pay, and Technician B falsely claimed 1,013 hours of pile load testing work, for which he was paid $1,266 in differential pay. We determined that the technicians did not perform any pile load testing during these hours because there was no record of the equipment necessary for this type of testing having been checked out and no activity records to indicate that pile load testing work was performed at that time. In fact, for some of these hours, we found documentation indicating that the technicians actually were performing gamma gamma logging, which did not entitle them to receive a pay differential.

Accordingly, we established that technicians A and B did not adhere to the standard of honesty required of state employees under Government Code section 19572, subdivision (f), and through failing to adhere to this standard, the two technicians improperly enriched themselves by $13,788. When a Caltrans investigator confronted the two technicians with evidence that they made false claims about working overtime and performing pile load testing, the technicians were unable to provide any evidence to refute that they had reported their time falsely.

One Technician Falsified Gamma Gamma Logging Test Results

At the same time that questions arose about whether technicians A and B had reported their work hours honestly, a question arose as to whether Technician A had been honest and truthful when conducting the gamma gamma logging testing he was assigned to perform.

In September 2008 Technician A was assigned to perform gamma gamma logging testing on piles that were being used to support the La Sierra Avenue bridge in Riverside. After Technician A performed the testing and forwarded the log ASCII data file containing the results to a Caltrans engineer for evaluation, the engineer informed Technician A that the test results for one of the piles being used in the project appeared incomplete because the size of the data file for the testing did not seem consistent with the amount of testing that needed to be performed. The engineer therefore asked Technician A to redo the testing on the pile. Two days later, Technician A submitted to the engineer a larger data file purportedly containing more testing data regarding the pile. This caused the

engineer to become concerned about the authenticity of the testing data Technician A presented, because the technician would not have been able to perform additional testing and obtain the testing data in such a short amount of time. As a result, the engineer closely reviewed the data that Technician A submitted regarding the pile. Through this review, the engineer discovered that Technician A had copied data from a different gamma gamma logging test and pasted it into the data file for the pile. The engineer alerted Caltrans management to this discovery. They confronted Technician A about the duplicate data found in the testing file for the pile being used in the La Sierra Avenue bridge project. When confronted, Technician A admitted that he falsified testing data for the pile because he did not want it to appear that he had submitted incomplete data, but he asserted that he did not falsify any other test results. By falsifying the testing data, Technician A violated his duty of honesty under Government Code section 19572, subdivision (f) and made false statements regarding his work on a highway construction project, which is prohibited by United States Code, title 18, section 1020.

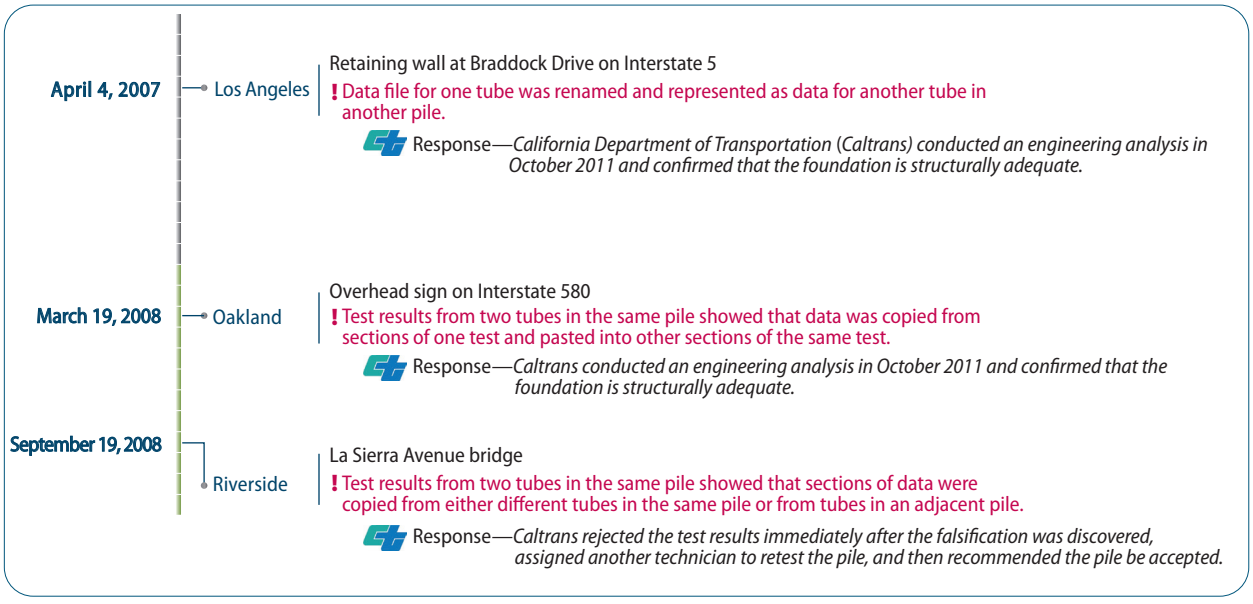
In response to Technician A's admitted falsification of testing data for one of the piles used in the La Sierra Avenue bridge project, on September 19, 2008, an engineer rejected Technician A's test results for the pile and directed that the pile be retested by another technician. The engineer did not direct that any other piles used in the project be retested. A second technician tested the pile and concluded that there were no significant anomalies or inconsistencies in the concrete used to form the pile and recommended that the pile be accepted for use in the project. Also, in response to Technician A's admitted falsification of testing data regarding the pile, a Caltrans engineer conducted an examination of testing data for some other gamma gamma logging tests performed by Technician A. In June 2009, the engineer identified two other incidents, each involving separate construction projects, in which it appeared that Technician A had falsified testing data for a pile being used to support a highway structure by copying data from a portion of a tube being tested into another portion of the same tube or by renaming a test file for one tube and representing it as results for another tube. Despite identifying these additional data falsifications, Caltrans did not at that time take any action to determine whether the structures affected were indeed sound.

Despite identifying these additional data falsifications, Caltrans did not at that time take any action to determine whether the structures affected were indeed sound.

Subsequently, in March 2010, the Inspector General contacted Caltrans about a complaint it received regarding Technician A falsifying gamma gamma logging test results on federally funded highway projects in California. Based on what the Inspector General learned from Caltrans, in June 2010 the Inspector General alerted the Highway Administration to the likelihood that gamma gamma logging testing on federally funded highway projects in California had been falsified. The Highway Administration, in turn, began

gathering data from Caltrans about its gamma gamma logging testing. The Highway Administration encountered difficulty obtaining from Caltrans all of the documentation it wanted to examine, but based on the documents it was able to compile, it identified only the same three projects that Caltrans identified in 2008 and 2009 as being projects in which Technician A had falsified gamma gamma logging testing data by copying data from other tests and pasting the data into the data files for the piles he was assigned to test. The Highway Administration freely acknowledged that because it had not obtained all of the information it hoped to obtain from Caltrans, it had not completed a comprehensive review of all of the testing performed by Technician A and other employees of the Foundation Testing Branch, and therefore there could be additional gamma gamma logging tests on highway projects not performed properly due to the falsification of testing data. In 2011, when Technician A's falsification of gamma gamma logging testing data was receiving attention from the press, Caltrans directed engineers to conduct engineering analyses of the two additional structures that Caltrans first identified in 2009 as having been tested improperly due to Technician A's data falsification. Caltrans completed those engineering analyses in October 2011 and found that the piles structurally were adequate. Figure 3 describes the three projects that Caltrans and the Highway Administration identified as being affected by Technician A falsifying data.

Figure 3
Dates of Each Falsification, Location, Project Description, Description of Falsification, and the California Department of Transportation's Response to the Falsification



Sources: Caltrans investigative report (August 2011), Office of the Inspector General for the United States Department of Transportation report (October 2011), November 2011 letter to the State Senate Committee on Transportation and Housing.

Note: None of the improper overtime or pay differential hours identified in this report occurred on the days that Technician A falsified test results.

There are two critical points to note about the determination in 2010 by Caltrans and the Highway Administration that Technician A falsified gamma gamma logging test results for only three projects. First, at that time, none of the agencies involved in reviewing his testing had examined all of the gamma gamma logging testing Technician A had performed. Second, the examination of his gamma gamma logging testing focused only on whether he falsified test results by copying and pasting data, and not by any other means. Technician A performed gamma gamma logging testing from July 2003 through October 2008, but neither Caltrans, the Highway Administration, nor any other agency conducted a complete review of all gamma gamma logging testing performed by Technician A during this entire span. Specifically, Caltrans focused on the three projects involving data falsification in 2007 and 2008 that its employees previously identified. The Highway Administration reviewed some data from 2001 through 2010, but its review was limited to the data it was able to collect from Caltrans. Specifically, it cited five caveats to its ability to conduct a comprehensive review, including its inability to copy Caltrans files with filenames that exceeded 255 characters and, most notably, the loss of an undetermined amount of data caused by a server crash at Caltrans in 2007. Caltrans did not back up the data and, as a result, the Highway Administration could not identify the missing data. Therefore, its review of gamma gamma logging testing by the Foundation Testing Branch should not be construed as a comprehensive review. Furthermore, Caltrans allowed Technician A to have access to electronic job files for eight months after he was removed from testing duties in early November 2008. This lengthy period of time provided Technician A with ample opportunity to further manipulate or delete those data files.

Caltrans allowed the technician to have access to electronic job files for eight months after he was removed from testing duties in early November 2008—ample opportunity to further manipulate or delete those data files.

Caltrans Subsequently Identified Additional Falsified Testing Data

In November 2011 information about the falsification of gamma gamma logging testing by Technician A was reported publicly by the news media, prompting the Legislature to convene oversight hearings inquiring into Caltrans' handling of the evidence it received of the falsification of gamma gamma logging testing data and the extent to which the falsification presented a threat to public safety. At the hearings, legislators expressed concern about whether Caltrans had been doing enough to identify the extent of the falsification of testing data and to ensure that California's bridges and highway structures were safe despite the falsification. In response to these concerns, and at the request of Caltrans' Structure Policy Board, Caltrans assembled a team of engineers, called the Gamma Gamma Logging Data Integrity Review Team (GAMDAT team), to conduct a comprehensive technical review of the archived gamma gamma logging data compiled by

Caltrans' technicians over an 18-year period and issued a report on the results of that review. The GAMDAT team is made up of engineering personnel from Caltrans' geotechnical services, structures construction, and research and innovation divisions, as well as from the Highway Administration. In addition to having membership on the GAMDAT team, the Highway Administration established a group of engineers and subject-matter experts to serve as independent peer reviewers of the GAMDAT team, providing comments and suggestions to the team as it progressed with its work.

In conducting its work, the GAMDAT team collected all available gamma gamma logging test files from March 1994 through May 2012, which amounted to a total of 224,104 test files. As described in the Background section of this report, every pile installed where water is present in the ground is required to have vertical testing tubes cast into the concrete forming a pile, spaced an equal distance apart, with one tube for every 12 inches of a pile's diameter. The 224,104 test files each contain data obtained from a testing tube found in a pile at a construction site or at the Foundation Testing Branch, where equipment is tested before being taken into the field. The GAMDAT team then used a series of computer programs to review the 224,104 test files and flag for further evaluation any data files containing data that appeared abnormal for the test being performed, thus indicating that the data in the files might have been falsified.

As an example of what the GAMDAT team flagged for further evaluation during its review of the data files using the computer programs, the team flagged test files in which either a portion or an entire series of data found in one gamma gamma logging test file was identical to data found in another gamma gamma logging test file. This kind of repetition of data indicates that data was copied from one test file and pasted into another. As another example, the team flagged for further evaluation test files in which the depth of the tube being tested was not recorded consistently within the file, such as when a technician identified the depth of a tube as being 20 feet but collected only 15 feet of data from the tube. As yet another example, the team flagged for further evaluation test files in which the data collected by a technician did not match the data evaluated by an engineer. As described in the Background section of this report, a technician is responsible for collecting data from a test, and an engineer is responsible for evaluating the data. When a technician performs a gamma gamma logging test, the technician's equipment generates a raw data file at the same time that it generates a log ASCII data file. Those two files should be identical, as they are supposed to collect the same data. The computer programs compared the two files to identify any differences in the data found in the two files, as differences could

This kind of repetition of data indicates that data was copied from one test file and pasted into another.

indicate that the data found in one of the files was altered in some way after it was generated. As a final example, the GAMDAT team flagged for further evaluation any test file in which there was a question concerning the timing of the testing performed, such as when a test took less time to perform than the amount of time generally expected.

From the 224,104 test files gathered, the GAMDAT team flagged a total of 1,102 test files for further evaluation due to abnormalities that the computer programs detected in the data contained in the files. The team organized the 1,102 suspect test files into groups of related tests or related irregularities to facilitate an in-depth analysis of the files by GAMDAT team members. For example, the GAMDAT team grouped some files together based on the bridge or structure involved or the type of data irregularity flagged by the computer programs. The analysis performed at this stage required the team to review the available records for the test file to determine whether a data irregularity existed, its impact, and the cause. For example, if a test was flagged because the depth of the tube tested was not reported consistently, further evaluation of the project file by the GAMDAT team was undertaken to determine whether the technician intentionally manipulated the testing data or the technician simply made an error when identifying the depth of the tube. Through examining the 1,102 test files, the GAMDAT team identified additional instances of data falsification.

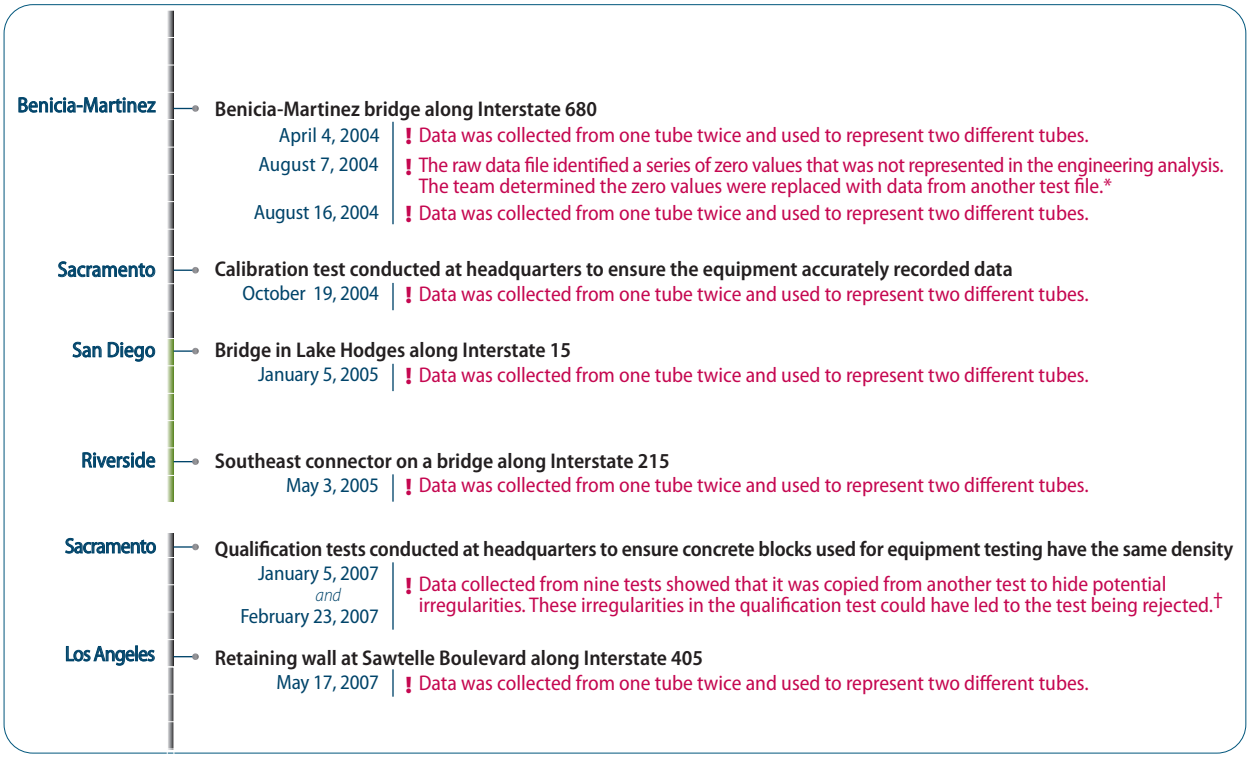
In January 2013 the GAMDAT team issued a report on its comprehensive review of the gamma gamma logging testing performed by Caltrans during the past 18 years. The report described the total number of gamma gamma logging data falsifications it was able to uncover through the comprehensive review, an assessment of the impact of the falsifications on Caltrans construction projects, and recommendations for how the falsifications should be addressed by Caltrans. The GAMDAT team identified eight additional incidents of data falsification involving gamma gamma logging testing in addition to the three that Caltrans discovered in 2008 and 2009, for a total of 11 incidents of falsification. Ten of these involved Technician A and one involved an unidentified engineer assigned to review testing data collected by Technician A.

The GAMDAT team identified eight additional incidents of data falsification involving gamma gamma logging testing in addition to the three that Caltrans discovered in 2008 and 2009, for a total of 11 incidents of falsification.

Six of the additional eight incidents of data falsification occurred during the testing of a pile supporting a highway structure or bridge. In five of the incidents, Technician A falsified gamma gamma logging data as described in Figure 4 on the following page. In the sixth incident, an engineer analyzing data collected by Technician A falsified gamma gamma logging data used in a 2004

analysis by copying data from another test and using it to replace some incomplete data collected by Technician A. The GAMDAT team found that this data falsification was intentional.

Figure 4
Additional Incidents of Data Manipulation Identified by the Gamma Gamma Logging Data Integrity Review Team



Source: California Department of Transportation.

* Although all other incidents involved intentional data manipulation by Technician A, this incident involved an engineer who intentionally manipulated the data.

† Although this test falsification occurred on two dates, the Gamma Gamma Logging Data Integrity Review Team and its peer reviewers are counting the falsification as one incident.

After Caltrans learned from the GAMDAT team that an engineer had falsified gamma gamma logging testing data, Caltrans attempted to determine the circumstances of the falsification. It found that two engineers were involved in the analysis of the testing data, and either of them therefore could have falsified the data. In this incident, one of the engineers falsified data by replacing data that appeared as a series of zeros with data that he copied from another test. The GAMDAT team reported that when data appear as a series of zeros, this typically means that the probe used for the test became disconnected from the winch that was moving it through the testing tube or there was a physical defect in the cable connected to the winch that caused the probe not to collect valid data. One of the two engineers was primarily responsible for preparing the analysis that was supported by the falsified data.

The other engineer was responsible for reviewing and approving the analysis performed by the first engineer. To try to determine which of the engineers had falsified the data, Caltrans interviewed both engineers. The engineer who prepared the analysis stated that he could not recall the specific incident in 2004 but believed that he performed work on the analysis. However, he asserted that he would not have copied and pasted the data and would have asked for assistance if he had encountered data consisting of a series of zeros. The second engineer stated that he did not recall seeing irregularities such as zeros in the data, and that if he had, he would have asked for the test to be redone. Both engineers stated that Caltrans had no policy prescribing the proper procedures to follow when gamma gamma logging test results contain zeros. Without an admission of data falsification by either engineer, Caltrans concluded that it could not determine which of these two engineers had copied and pasted the data from one test to another.

Subsequent to Caltrans learning from the GAMDAT team about these additional data falsifications, the state bridge engineer at Caltrans initiated engineering analyses to determine whether the bridges and structures involved were structurally sound. The state bridge engineer's analysis is detailed in a report that was issued in January 2013. The report concluded that all the affected bridges and structures were adequate structurally.

The report concluded that all the affected bridges and structures were adequate structurally.

The remaining two additional incidents of data falsification involved the falsification of data when Technician A was performing tests on gamma gamma logging equipment for the Foundation Testing Branch. In one incident, Technician A falsified nine test files related to qualification testing that he performed in January and February 2007 on concrete reference blocks. When the testing did not confirm that the blocks all had the same density, Technician A falsified the testing data to indicate that the testing confirmed the blocks all had the same density. When Caltrans learned from the GAMDAT team that the qualification testing results had been falsified, Caltrans retested the blocks and found that despite Technician A's test results being to the contrary, the testing blocks all had the same density. While this disparity in testing results could indicate that Technician A's testing equipment was not operating properly at the time he performed the qualification testing, the GAMDAT team concluded that this was highly unlikely, as the equipment had undergone multiple functionality tests before and after the qualification testing by Technician A, and the equipment was certified as operating properly. The GAMDAT team therefore concluded that operator error was the likely cause of Technician A not finding the reference blocks to have a consistent density and, because the blocks actually were of consistent density, his falsification of the qualification testing data had no impact on the validity of any subsequent gamma gamma logging testing performed.

In the other incident, Technician A falsified testing data for a calibration test that he performed in October 2004 on gamma gamma logging equipment. Here too, however, the GAMDAT team determined that the falsification of the testing data had no impact on the validity of any subsequent gamma gamma logging testing performed with the equipment, because the equipment had its calibration properly tested by another technician one month prior, and the results of this test confirmed that the equipment was calibrated properly. In addition, the GAMDAT team found that the falsified test results from the October 2004 test were not used in any subsequent analysis.

By falsifying the testing data, Technician A and the unidentified engineer violated their duty of honesty under Government Code section 19572, subdivision (f) and made false statements regarding their work on a highway construction project, which is prohibited by United States Code, title 18, section 1020.

In addition to identifying the eight additional incidents of data falsification, the GAMDAT team also expressed concern about another eight gamma gamma logging test files that contained incomplete testing data.

In addition to identifying the eight additional incidents of data falsification discussed above, the GAMDAT team also expressed concern about another eight gamma gamma logging test files that contained incomplete testing data. These files contained data that appeared as null values (blank information) rather than as zeros. The GAMDAT team reported that when data appear as null values, this can mean that the probe was collecting data faster than the software in the computer receiving the data from the probe could process it. As a result, data collected by the probe was not recorded into a computer file. This prompted concern among members of the GAMDAT team that the engineers analyzing the testing data may have replaced the null-value data when they conducted analyses using the data.

To address the concern of the GAMDAT team about the incomplete data gathered for these eight test files, Caltrans asked a GAMDAT team member to evaluate the files to determine whether data in the files had been replaced during analysis. The team member determined that the data in the files had been analyzed by two engineers who were not the same as the engineers involved in the analysis of the data that had been falsified. These engineers omitted the null values during their engineering analyses rather than replacing any of them. To do this, they omitted data from the test files ranging from 1 percent to 12 percent of the data in a file.

After reviewing the circumstances of the data omissions, Caltrans asserted that the engineers simply omitting the null values from their engineering analyses rather than requiring the testing be redone was appropriate and within the responsibilities of the two assigned engineers. However, the state bridge engineer, after learning of the data omissions, directed an analysis on two of the three structures

and bridges related to these eight test files to evaluate their structural integrity. He excluded one bridge from further analysis after an engineer's evaluation determined that the number of null values in the file did not merit a structural evaluation. The state bridge engineer determined that the structure and bridge that were evaluated were adequate structurally. In addition, the Foundation Testing Branch issued a new policy that requires retesting whenever zero or null values are found in testing data.

In addition to the GAMDAT team's report, the Highway Administration's group of peer reviewers undertook a critical review of the GAMDAT team's methodologies and issued their own report assessing the validity of the GAMDAT team's findings and conclusions. The peer reviewers issued their report in January 2013 and concluded that the GAMDAT team performed a reasonable and comprehensive review of all available gamma gamma logging data and discovered data irregularities with a high degree of certainty. They also made recommendations to the Foundation Testing Branch intended to improve its practices in performing gamma gamma logging testing. Similarly, the state bridge engineer's report also will be reviewed by a group of specialists in structural integrity assembled by the Highway Administration for the purpose of declaring whether they agree with the state bridge engineer's conclusions regarding the soundness of the bridges and structures identified in figures 3 and 4. We are hopeful that through the GAMDAT team's comprehensive review of the gamma gamma logging testing performed by the Foundation Testing Branch, the state bridge engineer's analysis of the bridges and structures affected by falsified testing, and validation of the work of both the GAMDAT team and the state bridge engineer by independent peer reviewers assembled by the Highway Administration, Californians now have an accurate assessment of the extent to which the gamma gamma logging testing of California's bridges and highway structures has been falsified and the impact that those falsifications has had on the safety of the bridges and structures that were tested improperly.

Californians now have an accurate assessment of the extent to which the gamma gamma logging testing of California's bridges and highway structures has been falsified and the impact that those falsifications has had on the safety of the bridges and structures that were tested improperly.

The Supervisor Misappropriated State Property for Personal Use With Assistance From the Two Technicians and Other Subordinates

In February 2010 Caltrans received information indicating that the supervisor improperly directed state employees to transport steel beams and fabricate, transport, and install a metal gate on his private property using state-owned materials. Caltrans shared this information with the Inspector General in March 2010 after the Inspector General contacted Caltrans about data falsification by Technician A. The Inspector General advised Caltrans that because it already was conducting a criminal investigation of Technician A related to his falsifying testing data, it would include

this allegation regarding Technician A's supervisor within the scope of its investigation. Caltrans therefore suspended its investigation of the supervisor.

The investigation by the Inspector General revealed that the supervisor, with help from technicians A and B, secretly removed materials from Caltrans facilities and had the materials transported to land that he owned near Susanville.

The investigation by the Inspector General revealed that the supervisor we discussed earlier, with help from technicians A and B, secretly removed materials from Caltrans facilities and had the materials transported to land that he owned near Susanville. The transported materials included 12 steel beams, about 50 feet long, that had been used for pile load testing at a Caltrans construction project in Visalia and then moved to a Caltrans laboratory in Sacramento in 2000 or 2001. The transported materials also included scrap steel and other materials, such as galvanized metal sheeting, drill rods, pipes, and buckets stored at the Caltrans Maintenance Equipment Training Academy in Sacramento. Some of the scrap steel and other materials were fashioned into a large gate that was installed at an entrance to the supervisor's land.

Regarding his removal and transportation of the beams to his land near Susanville, the supervisor, during a newspaper interview in January 2012, denied that he had removed the beams with any intention of stealing them. He claimed that he had been instructed by a Caltrans senior official to move the beams from their laboratory location to get them out of the way. Lacking any other place to store them, the supervisor stated that he directed Technicians A and B to transport the beams to his land near Susanville, approximately 180 miles away, for storage. The supervisor admitted that he did not tell the senior official that this was how he resolved the storage location issue. When asked about the supervisor's statement, the senior official acknowledged that he had told the supervisor to move the beams to another location but assumed that he would take them either to the Maintenance Equipment Training Academy or to a job site where they could be used. The supervisor stated that he believed the beams were suitable for recycling or could be reused. However, one of the technicians who helped move the beams stated that he believed the beams were warped and should be valued only as scrap metal. Nevertheless, the senior official stated that all Caltrans scrap metal, including the beams, has a recycling value that is dependent on the price of steel. In April 2012 the supervisor arranged for the beams to be moved from his land to another storage location in Susanville. In May 2012, more than two years after Caltrans learned that the supervisor had transported the beams to his land near Susanville, Caltrans arranged for the beams to be picked up and returned to a Caltrans facility at a cost of $2,000. Caltrans estimated the salvage value of the beams to be approximately $10,000.

Regarding his transporting of other Caltrans materials to his land near Susanville, the supervisor admitted to investigators that he had removed miscellaneous pieces of scrap metal and other such materials from a Caltrans recycling container and took them to his land. Further, the supervisor admitted that he requested another subordinate employee to fabricate a gate from scrap steel and other materials obtained from the Maintenance Equipment Training Academy. The subordinate employee stated that he fabricated the gate in December 2007. He and another subordinate transported the gate to the supervisor's land and installed it around May 2008. The supervisor asserted that the material used for the gate had no value and that Caltrans employees were allowed to take steel left over from projects for their personal use. However, the senior official contradicted the supervisor's assertion and stated that Caltrans employees are not allowed to take such materials for personal use. As of January 2013, aside from the beams, none of the materials that the supervisor removed from Caltrans facilities and transported to his land has been returned to Caltrans' custody, and the supervisor has not reimbursed Caltrans for the value of the materials taken.

As of January 2013, aside from the beams, none of the materials that the supervisor removed from Caltrans facilities and transported to his land has been returned to Caltrans' custody, and the supervisor has not reimbursed Caltrans for the value of the materials taken.

By misappropriating Caltrans materials for his personal use, the supervisor violated Government Code section 8314, which prohibits the misappropriation of state property for personal use, and Penal Code section 504, which prohibits the embezzlement of state property. This is particularly evident regarding the Caltrans materials that he did not simply store on his land, but had fashioned into a gate and installed on his land for personal use.

In the aftermath of the Inspector General's investigation of the supervisor's alleged misappropriation of Caltrans materials, the Highway Administration took issue with the supervisor's decision to take the beams and other materials and move them to his land, because the beams and other materials were salvaged from federal projects without being either properly recorded for reuse in other federal projects or returned to the Highway Administration for credit against the projects in which the materials were intended to be used. More importantly, because the supervisor's managers were unaware of what the supervisor had done with the beams, they were unable to account for them properly and reuse them in other federal projects. Also, the Inspector General referred the matter of the supervisor's misappropriation of Caltrans materials to the United States Attorney's Office and the Sacramento County District Attorney for their consideration of whether to file criminal charges against the supervisor. To date, no decision has been made by either agency to file criminal charges.

Actions by Caltrans Regarding the Employees' Misdeeds

Caltrans took disciplinary action against technicians A and B and the supervisor for the improprieties identified in this report. However, it subsequently reached agreements with technicians A and B that substantially modified the terms of its disciplinary actions.

After a long history of taking disciplinary actions against Technician A dating back to 1990, including an unsuccessful attempt to dismiss him in 1998, Caltrans addressed Technician A's first confirmed incident of the falsification of gamma gamma logging data in 2008 by issuing a letter of warning to him in May 2009. However, when the Highway Administration confirmed in 2011 that he had falsified data on at least two other occasions and soon afterward his falsifications were receiving a lot of public attention, Caltrans placed Technician A on administrative leave in November 2011 and dismissed him on November 18, 2011. Caltrans cited among its reasons for dismissing Technician A was that he was dishonest on multiple occasions and that he had engaged in inexcusable neglect of duty. However, Technician A appealed his dismissal to the State Personnel Board and, while the appeal was pending, reached an agreement with Caltrans in January 2012. Under the agreement, Caltrans allowed Technician A to retire from state service effective November 2011 rather than being dismissed. The agreement also prohibits Technician A from seeking or accepting any future employment with the State but does not specify how this prohibition will be enforced, particularly because the agreement required Caltrans to remove all documentation pertaining to the November 2011 disciplinary action from Technician A's official personnel records. As such, we see a substantial risk that Technician A could be hired by another state agency or by a private employer who would be unaware of his past dishonesty and neglect of duty.

We see a substantial risk that Technician A could be hired by another state agency or by a private employer who would be unaware of his past dishonesty and neglect of duty.

Caltrans initially addressed Technician B falsely claiming overtime and differential pay by suspending him without pay for 45 days from November 2011 through January 2012. However, Technician B appealed this action to the State Personnel Board and, while the appeal was pending, reached an agreement with Caltrans in March 2012. Under the agreement, Caltrans reduced Technician B's 2011 suspension to 10 days, withdrew all charges related to his falsely claiming overtime pay and differential pay, and allowed him to use paid leave hours for the other 35 days of the 2011 suspension.

As for the supervisor, in November 2011, Caltrans placed him on administrative leave and dismissed him effective November 18, 2011. The dismissal notification indicated that this was Caltrans'

first disciplinary action against him and cited numerous instances of dishonesty, misappropriation of state resources, and inexcusable neglect of duty as its reasons for the dismissal. The supervisor has appealed this dismissal to the State Personnel Board, where the matter still is pending.

Because Caltrans could not identify with certainty which of the two engineers was responsible for falsifying gamma gamma logging testing data in 2004, it was unable to initiate any disciplinary action for that incident. As a result, Caltrans has focused on revising its policies to try to prevent any similar falsifications from occurring in the future.

Recommendations

To remedy the effects of the improper governmental activities described in this report and to prevent them from recurring, we make the following recommendations.

To address the false claims for overtime and differential work hours submitted by technicians A and B and approved by their supervisor, we recommend that Caltrans:

- Seek $6,834 in reimbursement from Technician A for the overtime and pay differential payments that he received improperly.
- Seek $6,954 in reimbursement from Technician B for the overtime and pay differential payments that he received improperly.
- Establish a system to enforce the requirement that specific overtime hours be preapproved for an employee to be compensated for the hours.
- Reinforce with Caltrans supervisors that they have a duty to verify that overtime and specially compensated work actually has been performed prior to authorizing payment for the work.
- Require the hours of overtime and differential work claimed by an employee to be matched with specific projects before they are approved for payment to help ensure that the hours claimed are legitimate.

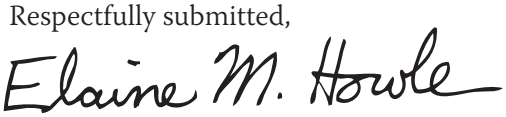
To address the lack of controls that allowed the falsification of gamma gamma logging testing data by Technician A and the engineer, we recommend that Caltrans:

- Require that Foundation Testing Branch technicians submit to an engineer both the raw data file and log ASCII data file for every gamma gamma logging test performed for a project to help ensure that testing data has not been falsified.
- Implement the recommendations of the GAMDAT peer reviewers intended to improve the gamma gamma logging testing procedures of the Foundation Testing Branch.
- Implement any recommendations made by the GAMDAT team intended to strengthen the integrity of the gamma gamma logging testing performed by the Foundation Testing Branch.
- Implement a policy to ensure that engineers perform analyses on properly collected data and do not misrepresent gamma gamma logging test results.

To address the misappropriation of state property by the supervisor, we recommend that Caltrans:

- Obtain an estimate of the value of the materials the supervisor removed from Caltrans facilities and placed on his property (aside from the steel beams) as well as the value of the state employee time spent refashioning and transporting those materials.
- Seek reimbursement from the supervisor for the $2,000 cost of transporting the steel beams that he placed on his land back to a Caltrans facility.
- Seek reimbursement from the supervisor for the cost of the Caltrans materials (aside from the steel beams) that he transported to his land and the cost of the state employee time spent transporting and refashioning those materials.
- Establish controls to ensure that materials intended for a construction project are tracked properly, and that when materials intended for a federal highway project are not used for the project, the materials are reused for other federal projects or returned to the Highway Administration.
- Establish controls to ensure that scrap materials are recycled and not taken for personal use by Caltrans employees.

Respectfully submitted,



ELAINE M. HOWLE, CPA
State Auditor

Date: March 28, 2013

Steven Benito Russo, JD, Chief of Investigations

Staff: Russ Hayden, CGFM, Manager of Investigations
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For questions regarding the contents of this report, do not contact the above-listed staff. Please contact Margarita Fernández, Chief of Public Affairs, at 916.445.0255.

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Appendix

THE INVESTIGATIONS PROGRAM

The California Whistleblower Protection Act (Whistleblower Act) contained in the California Government Code, beginning with Section 8547, authorizes the California State Auditor (state auditor) to investigate allegations of improper governmental activities by agencies and employees of the State. Under the Whistleblower Act, an improper governmental activity, as defined by Government Code section 8547.2, subdivision (c), includes any action by a state agency, or by a state employee in connection with his or her employment, that violates a state or federal law; violates an executive order of the Governor, a California Rule of Court, or a policy or procedure mandated by the *State Administrative Manual* or *State Contracting Manual*; is economically wasteful; or involves gross misconduct, incompetence, or inefficiency. To enable state employees and the public to report suspected improper governmental activities, the state auditor maintains a toll-free Whistleblower Hotline: (800) 952-5665. The state auditor also accepts reports of improper governmental activities by mail and over the Internet at www.auditor.ca.gov.

Although the state auditor conducts investigations, it does not have enforcement powers. When it substantiates an improper governmental activity, the state auditor reports confidentially the details to the head of the state agency or to the appointing authority responsible for taking corrective action. The Whistleblower Act requires the agency or appointing authority to notify the state auditor of any corrective action taken, including disciplinary action, no later than 60 days after transmittal of the confidential investigative report and monthly thereafter until the corrective action concludes. The Whistleblower Act authorizes the state auditor to report publicly on substantiated allegations of improper governmental activities as necessary to serve the State's interests. The state auditor may also report improper governmental activities to other authorities, such as law enforcement agencies, when appropriate.

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Summary of Agency Response and California State Auditor's Comments

The California Department of Transportation (Caltrans) responded that although it disagrees with our characterization of what we asked Caltrans to do to assist us with the investigation and our characterization of Caltrans' responsiveness to our requests, it agrees with our findings.

Regarding our characterization of what we asked Caltrans to do to assist us with the investigation, Caltrans protested that in our April 2009 request for assistance, we did not ask Caltrans to review or analyze time sheets, and Caltrans did not know that the complaint we were investigating involved overtime related to pile load testing. Caltrans also noted that in July 2010 it provided information to us regarding the status of its work and in October 2010 informed us that it would issue a report regarding its work. We agree that in July 2010, four months after we asked Caltrans to explain why technicians were claiming overtime not associated with field testing, it provided us with an update regarding its work. We also agree that three months later, in October 2010, Caltrans told us it would provide a written report about its work, which it eventually did one year later, in October 2011. These facts accurately describe Caltrans' level of responsiveness during the period March 2010 through October 2011. However, we disagree with Caltrans' assertion that we mischaracterized the assistance that we asked it to provide in April 2009.

In April 2009 we asked Caltrans for copies of time sheets and travel documents for employees of the branch, as well as Caltrans' justification for the overtime that these employees reportedly worked. We specifically identified the hours of overtime associated with each employee for which we wanted to receive documentation and justification. Our request for Caltrans to provide justification for the overtime hours inherently called for a review and analysis of the available information. Moreover, the reports that we received from Caltrans in response to our request reflect that it understood we had requested it to review and analyze the time sheets and travel documents in order to provide a response. Specifically, in its status reports to the state auditor in June, July, and August 2009, Caltrans reported that it was analyzing and evaluating the information it collected (time sheets and travel documents) in order to respond to our request. In addition, the information Caltrans submitted to us in September 2009 included a spreadsheet analysis for each employee that compared the employee's daily overtime to the travel expense claims submitted by the employee and the employee's stated reason for the trip.

We expected that, as part of Caltrans' due diligence in responding to our request, it would have ensured that the justification it provided for overtime was consistent with its own analysis. However, Caltrans' response in September 2009 was inconsistent. Caltrans justified the overtime charged by technicians A and B by saying it performed testing procedures in the field as described in the report. However, in its analysis of the time sheets and travel documents, a Caltrans investigator noted many instances in which a technician claimed overtime for field work when there was no documentation indicating that the technician had been in the field. This discrepancy should have raised concerns with Caltrans, because its stated reason for a technician working overtime was not supported. Although its methodology was flawed, its response included a review and analysis of the information requested. As a result, we believe our characterization of what we asked Caltrans to do in April 2009 to assist us with our investigation is accurate.

Caltrans also included in its response to this report a summary of the actions it has taken or will take to implement our recommendations. To address the false claims for overtime and differential work hours submitted by technicians A and B, Caltrans stated it could not seek reimbursement from technicians A and B for the $6,834 and $6,954. These are the amounts we concluded they were overpaid for overtime and differential work they did not perform. Caltrans' reason for not seeking reimbursement is that it reached settlement agreements with both of these technicians as described in this investigative report. Caltrans also reported that effective December 2011, it made revisions to an overtime policy that requires additional documentation prior to claimed overtime hours being approved. It also sent an email to all managers and supervisors the same month that communicated both the revised policy and supervisors' responsibility to review the policy with their employees. Caltrans also reported that effective January 2012, all overtime requests by employees of the branch were to be reviewed by the branch's supervisor and office chief prior to being approved and that the supervisor must perform weekly reviews of the overtime claimed by employees through a comparison of the information available from timesheets and daily field reports. The supervisor also must ensure that overtime will be charged to the correct project prior to approving it.

To address the control weakness allowing the falsification of gamma gamma logging testing data by Technician A and an engineer, Caltrans reported that in November 2011 it began requiring technicians to submit both the raw data file and the log ASCII file when transmitting gamma gamma logging test results to an engineer for analysis. In addition, Caltrans reported that effective October 2012, it implemented a new process that requires a second engineer and the branch supervisor, in addition to the project engineer, to review all gamma gamma logging testing data for a pile before the pile is given approval. Caltrans also introduced

to the branch a computer tool, provided by the Gamma Gamma Logging Data Integrity Review Team (GAMDAT team), that would enable its staff to identify gamma gamma logging data irregularities that could indicate data falsification. Caltrans also reported that it would assemble a team of foundation testing subject-matter experts to review and analyze the recommendations made by the GAMDAT team and the team's peer reviewers for the purpose of implementing their recommendations by November 2013. Finally, Caltrans reported that it implemented a policy in August and September 2012 to require retesting whenever a gamma gamma logging test includes data results with zero or null values, as this suggests the data was not collected or recorded properly in the field.

To address the misappropriation of state property by the supervisor, Caltrans reported that it filed a civil action against the supervisor in May 2012 in an effort to discover the extent of the materials he removed from Caltrans' possession and to seek the return of those items or compensation for them. In order to provide improved accountability for materials intended for federal construction projects, Caltrans plans to implement a new management system in July 2013 that will allow it to track the purchase and subsequent use and/or return of all materials used on federal projects. To ensure that scrap materials are recycled rather than taken for personal use, Caltrans reported that it established a policy in July 2012 that specifically addresses recycling and storing scrap materials, and that the deputy division chief communicated this policy to all staff. In addition, Caltrans plans to post signs in April 2013 specifically prohibiting the removal of scrap materials and in July 2013 will provide training to ensure compliance with this policy.

We plan to evaluate Caltrans' efforts as part of our follow-up process to ensure Caltrans' asserted actions comply with our recommendations.

cc: Members of the Legislature
Office of the Lieutenant Governor
Little Hoover Commission
Department of Finance
Attorney General
State Controller
State Treasurer
Legislative Analyst
Senate Office of Research
California Research Bureau
Capitol Press