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Analysis of Disclosures, Agency Investigation and Report, Whistleblowers' Comments, and Comments of the Acting Special Counsel

OSC File Nos. DI-07-1993 and DI-07-2225

Summary

Two whistleblowers, Angela Rex[1] and a whistleblower who requested anonymity, disclosed to the Office of Special Counsel (OSC) that employees were exposed to substantial and specific dangers to public safety at the Department of the Interior (DOI), United States Geological Survey (USGS), Western Ecological Resource Center (WERC), San Francisco Bay Estuary Field Station (SFBEFS), Vallejo, California. Specifically, they alleged that employees, who had limited visibility of oncoming trains, were required to cross an active railroad bridge to perform water quality tests. Ms. Rex, a former Biological Research Assistant, further alleged that employees handled explosives without sufficient safety training, and explosives were stored and transported in unsafe conditions.

According to the agency report, the DOI Office of the Inspector General (OIG) investigated the whistleblowers' allegations and concluded that employees were not exposed to a substantial and specific danger when crossing the railroad bridge. However, the report stated that explosives had been stored inappropriately and were at times kept in containers not designed for explosives. Additionally, SFBEFS lacked a formal explosives training program. WERC management has begun taking steps to cure these deficiencies.

After providing the whistleblowers an opportunity to comment on the report, OSC learned about an additional safety incident involving the railroad bridge that was not addressed in the agency's report. OSC requested and received a supplemental report addressing the incident. The supplemental report confirmed the existence of the additional safety incident but determined that it did not affect the conclusions of the prior report.

The Whistleblowers' Disclosures

The whistleblowers reported that SFBEFS employees cross an active railroad bridge to perform water quality tests on Salt Ponds A20 and A21 in the Don Edwards San Francisco Bay National Wildlife Refuge. Specifically, they alleged that visibility of oncoming trains is impeded due to a curve in the track to the north of the bridge. The railroad bridge, which the whistleblowers estimated has a length of 300 yards, is too narrow for a person to cross at the same time as a train. The railroad bridge is used by both freight and commuter trains, which can travel upwards of 70 miles per hour. Because of their slower speed, the freight trains pose a

[1] Angela Rex requested anonymity when we referred her allegations to the Secretary of the Interior. She subsequently consented to the disclosure of her identity when she submitted her comments on the agency's report.

lesser threat. However, if a commuter train departs from its regular schedule or fails to blow its whistle, employees may have a reduced reaction time and are at risk of a collision. The whistleblowers also suggested that the salt ponds may be accessible by boat instead of crossing the railroad bridge.

In addition, Ms. Rex alleged that employees did not receive sufficient safety training on handling explosive charges, and the charges were improperly transported and stored. The charges are used in conjunction with box nets, which are used to trap birds. Box nets are propelled into the air by three 10-inch rockets. Each rocket contains a 5-inch charge. Ms. Rex alleged that the charges were kept in a cardboard box when stored at the Field Station. When needed for use, one team was able to transport them in a safe. However, the other teams transported their charges in tackle boxes when the safe was already in use. According to Ms. Rex, the employees received no formal training on how to handle the charges, only a brief explanation from a colleague.

Department of the Interior Investigation and Report

According to the agency report, the OIG conducted the investigation at the request of Secretary of the Interior Dirk Kempthorne. The OIG investigators interviewed 14 employees and visited the railroad bridge in Newark, California, and the USGS Explosives Magazine in Dixon, California.

John Takekawa, Research Wildlife Biologist, is responsible for oversight of operations at the SFBEFS. According to Mr. Takekawa, one of the SFBEFS projects involves research and restoration work to salt ponds at the Don Edwards San Francisco Bay National Wildlife Refuge in the south bay area of San Francisco Bay. Salt Ponds A20 and A21 are known as "island ponds," because of the difficultly required to access them. Employees access these island ponds on a weekly to monthly basis by walking across a railroad bridge. Mr. Takekawa believes the railroad bridge is safe for regular pedestrian use. It contains a walkway by which pedestrians may cross the bridge after evaluating whether a train is approaching. However, pedestrians cannot use the walkway at the same time a train crosses the railroad bridge.

The railroad bridge is not open for public use. Besides the USGS, it is used by United States Fish and Wildlife Service employees, contractors, and university students. The investigators conducted a site visit to the railroad bridge. They estimated that a "leisurely walk" across the bridge access to the first salt pond would take two minutes, covering a distance of approximately 300 feet. A "leisurely walk" from the first salt pond to the second salt pond took about one minute, covering a distance of approximately 200 feet. While on site, the investigators observed a northbound freight train. The train was heard 6 minutes before it crossed the bridge and was observed four minutes before it crossed the bridge. They also saw a southbound passenger train. The train was heard and observed 3.5 minutes before it crossed the bridge. Another southbound passenger train was heard and observed about 3 minutes before it crossed the bridge.

Mr. Takekawa explained that job hazard analysis packets are kept in government vehicles. These packets instruct employees to scan the tracks for approaching trains and to stay alert while walking across the bridge. Commuter train schedules are also included in the packet. Because they move at a slower speed than commuter trains, Mr. Takekawa said that freight trains are not a significant safety threat. In their interviews with various WERC employees, only Ms. Rex expressed safety concerns about the railroad bridge. Ms. Rex noted that the commuter trains that cross the railroad bridge are very fast, do not always blow their whistles, and occasionally depart from their regular schedules. She also expressed concern about a "blind curve" to the north of the bridge.

The report identified three safety incidents at the railroad bridge. On March 11, 2006, Jennifer MacLean, then a USGS employee, was injured crossing the railroad bridge. Ms. MacLean, a former employee of USGS, was not interviewed as part of the investigation. According to the report of the March 11, 2006, incident, Ms. MacLean looked with binoculars for oncoming trains and began to cross the railroad bridge when a bullet train suddenly approached. She turned around and ran back, but her left lung collapsed while running. She was not hit by the train, but she was required to stay overnight in the hospital for treatment of her collapsed lung. A safety review of the railroad bridge was subsequently conducted on April 3, 2006. The review determined that it was safe for employees to use the railroad bridge to gain access to the salt ponds. The review concluded that Ms. MacLean's "pre-existing physical ailment, coupled with her lack of awareness or absence of caution of the approaching train, caused her excitement and subsequent injury." After the safety review, procedures to cross the railroad bridge were updated and a job hazard analysis was created. Mr. Takekawa now discusses the requirements of the salt pond work in greater detail and gives employees the choice of whether to be assigned work that requires crossing the bridge.

Employees told investigators about two other incidents of people who encountered difficulties while crossing the railroad bridge. Annie Schultz, WERC Biological Technician, had spoken to a Pacific Gas and Electric (PG&E) employee who was on the bridge when a train approached. The employee had to hold onto the side of the bridge while the train passed. The report did not identify the PG&E employee's name or when this event occurred. Jill Bluso, WERC Biological Science Technician, recalled that David Haines, a former USGS technician, was startled by an oncoming train in July 2003. Mr. Haines had to run off the bridge and jump onto an adjacent path. Ms. Bluso opined that Mr. Haines had failed to look back for a train while crossing the railroad bridge.

The report examined the whistleblowers' suggestion in the referral letter that accessing the salt ponds by boat may be a more feasible option than crossing the railroad bridge. While the salt ponds could be accessible by boat, Mr. Takekawa explained that employees would need to be trained in towing, launching, and operating the boats. Boat access to the salt ponds would also be hampered by the lack of an established docking location. In addition, boat navigation could be dangerous at low tide due to the shallow marsh area.

Next, the report addressed Ms. Rex's allegation regarding the storage and transport of the rocket net charges used to propel the box nets and the training regarding their use. The charges are classified as Division 1.3 explosives, which are defined as "explosives that have a fire hazard

and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard."[2] Division 1.3 explosives are required to be "stored in a locked/secure Type 4 magazine/location."[3] Explosives must be stored in locked magazines when not in use.[4] Most interviewees stated that the charges are stored in the explosives magazine at Dixon Field Station when not in use. The explosives were stored in a Type 2 magazine at the Dixon Field Station. Type 2 magazines are permitted to hold explosives, such as the Division 1.3 explosives, which are required to be held in a Type 4 magazine.[5] While no formal requisition system exists to request charges from the magazine, only one employee at the Dixon Field Station has the key to the explosives magazine, and usually the same two employees pick up the explosives. The magazine is self-inspected on an annual basis.

The report next addressed how the charges are transported and placed in temporary storage. Hazardous materials regulations pertaining to their safe transportation do not apply to the federal government.[6] The charges, which require an electrical pulse to detonate, are transported from their manufacturer in cardboard boxes. Their Material Safety Data Sheet states that they should be kept away from flame, fire, and stray electrical current. USGS employees were not aware of any policies regarding transportation of the charges from the magazine to the field. They acknowledged that four types of containers are used to transport the charges: the manufacturer's shipping boxes, a plastic fireproof safe, tackle boxes, and coolers. The fireproof safe is the primary method used to transport the charges to the field, because usually only one technician needs charges at a given time. When the charges are in temporary storage at SFBEFS, they often are kept inside a portable safe. The safe is kept in an office or in a government vehicle parked in a garage.

In contrast to hazardous materials regulations, the USGS Occupational Safety and Health Requirements Handbook SM-445-2-H requires a certification process for the use or transportation of explosives, formal classroom training for such activities, and retention of training and certification records for five years. However, there is no formal training program at the WERC through which employees are instructed on how to properly use the charges. Consequently, there are no certification procedures or records of training. Rather, an informal, individual method of training was used. Mr. Takekawa stated that employees must demonstrate competence in handling the charges before they were permitted to use the rockets. Most employees felt prepared by the rocket net training provided. Conversely, Ms. Rex explained that she was placed in charge of rocket netting in 2007 despite having only witnessed them being set up in 2005 and 2006. When she relayed her concern about not knowing how to set up or use the rockets, Ms. Rex was given only five minutes of training.

The agency's conclusions and subsequent remedial actions were listed in a two-page letter within the report from Timothy R. Petty, Deputy Assistant Secretary for Water and Science. Mr. Petty concluded that the investigation did not support a finding that workers who

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[2] 49 C.F.R. § 173.50(b)(3).
[3] USGS Manual SM 445-2-H Chapter 39.
[4] 27 C.F.R. § 555.205.
[5] 27 C.F.R. § 555.203(b).
[6] 49 C.F.R. § 171.1(d)(5).

crossed the railroad bridge were exposed to a substantial and specific danger. He noted that employees who express concern about crossing the railroad bridge are not required to do so. Regarding the rocket charges, Mr. Petty wrote that "explosives have occasionally been stored inappropriately and kept in containers not designed for explosives." He further noted that WERC management have been "counseled on the need to modify practices [and the] need for a formal explosives training program." WERC management is currently working with safety management officials to establish such a training program and to ensure that the explosives are stored and transported properly. Despite the deficiencies, Mr. Petty found that management clearly intended that employees were experienced in both safe handling and storage of explosives. Consequently, Mr. Petty explained that no disciplinary action against management was warranted.

Whistleblowers' Comments

OSC received comments from both whistleblowers regarding the sufficiency of the agency's investigation and report. Ms. Rex stated that she heard that formal training now occurs and proper storage of the explosives is being arranged. She submitted several additional comments as well. She believes the railroad companies and former employees should have been contacted. She suggested that Mr. Takekawa may have spoken to current employees before their interviews with the investigators, but acknowledged that she did not have first-hand knowledge that such meetings took place. Ms. Rex disagreed with some of Mr. Takekawa's factual assertions. Specifically, she disagreed with his statements that Ms. MacLean had a panic attack, his description of how the explosives were stored, and that job hazard analyses were placed in the vehicles.

The anonymous whistleblower, whose sole allegation was the railroad bridge allegation, provided similar criticism as Ms. Rex. This whistleblower believed that former employees and certain current employees should have been interviewed. The whistleblower also questioned the legality of crossing the railroad bridge.

Supplemental Report of the Department of the Interior

Because both whistleblowers commented that the agency should have interviewed additional witnesses, OSC contacted the whistleblowers to determine which current and former employees they believe should have been interviewed and why they felt those interviews would have been helpful. In the course of gathering this information, OSC learned about an additional incident in which USGS employees were placed in danger while crossing the railroad bridge. Shortly before Ms. MacLean's collapsed lung incident, Biological Science Technician Ann Murphy and Intern Michael Bauman faced a similar danger. According to one of the whistleblowers, Ms. Murphy and Mr. Bauman ran across the railroad bridge to avoid an approaching train. Mr. Bauman made it to the end of the railroad bridge, but Ms. Murphy was forced to jump into a marsh. On July 16, 2008, OSC requested a supplemental report to address the safety incident involving Ms. Murphy and Mr. Bauman. OSC also requested that the agency interview Ms. MacLean, because she was not interviewed during the earlier investigation. OSC received the supplemental report on September 23, 2008. Both whistleblowers were provided copies of the supplemental report but declined to comment on it.

The USGS Office of the Director conducted the supplemental investigation. The investigation included interviews with Mr. Takekawa, Wildlife Biologist Nicole Athearn, Lead Field Biologist Kathleen Henderson and Ms. Murphy and a site visit to the railroad bridge. The investigators could not locate any contact information for Mr. Bauman, and telephone calls to Ms. MacLean were not returned. The site visit to the railroad bridge was conducted on August 27, 2008. In her interview, Ms. Murphy explained that she and Mr. Bauman were trying to cross the railroad bridge to reach Salt Ponds A20 and A21 in the fall of 2005. She could not recall the specific date. Before entering the bridge, Ms. Murphy looked in both directions but did not see a train approaching on either side. She did not use binoculars as she had been instructed to do. While they were on the railroad bridge, Mr. Bauman alerted Ms. Murphy that a train was approaching from the north direction. Neither individual had heard the train's horn before this time. Ms. Murphy and Mr. Bauman quickly exited the railroad bridge. Ms. Murphy jumped from the track onto a side embankment to avoid the train. She did not report the incident to management at that time. According to Ms. Henderson, Ms. Murphy mentioned this incident in passing after Ms. MacLean's incident on March 11, 2006, but Ms. Henderson did not learn that Ms. Murphy had to jump onto an embankment until her interview during the supplemental investigation. Similarly, Mr. Takekawa and Ms. Athearn were unaware of this incident until their interviews.

The supplemental report next discussed the standards of care that were in place both before and after Ms. MacLean's March 11, 2006, incident. Prior to this incident, employees were told to check in both directions using binoculars before crossing the railroad bridge and to be aware of their surroundings while crossing it. After the incident, written Job Hazard Analysis (JHA) was developed. The JHA is given to employees before they cross the railroad bridge and its presentation to them is documented. In addition, a train schedule is given to employees to assist them in safely crossing the railroad bridge.

In the site visit, the inspector noted the flat terrain. There was a visibility between 2 and 3 miles on either end of the railroad bridge. It took the inspector 3 minutes and 20 seconds to cross the railroad bridge while walking at a leisurely pace. Only one commuter train was observed crossing the bridge during the inspector's half hour visit. The train took 90 seconds to cross the railroad bridge from the curve in the track north of the bridge. The train was observable one mile before it reached the curve in the track. The supplemental report concluded that the implementation of the JHA, checking for trains using binoculars, using the train schedule, and maintaining awareness while crossing the bridge mitigate the risk to permit personnel to safely cross the railroad bridge. Consequently, the supplemental investigation did not affect the conclusions of the initial report.

Conclusion and Comments of the Acting Special Counsel

The reports place the burden of assessing and assuming risk of crossing the bridge on the employee. Having taken on this risk, an employee could potentially find herself waylaid by an unknown pre-existing condition or a mis-step, unable to cross the bridge in time, and be seriously injured or killed by a train. Such incidents have already occurred at least four times. Indeed, it would take a train going 70 miles per hour only 25 seconds to cover a half mile

distance. The reports suggest that the agency itself is willing to regard this potential for human harm as an acceptable risk, and to give employees discretion in whether to volunteer for work that involves crossing the bridge.

Although I cannot substitute my judgment for that of the agency head in making such a determination, were I in a similar position, I might request funding to build an alternate footbridge. At minimum, I would utilize a spotter, particularly in times of poor visibility. This idea was already suggested in the March 19, 2006, accident report addressing Ms. MacLean's incident. Such a simple remedial measure could dramatically reduce the likelihood of encountering an unanticipated train in periods of poor visibility. Notwithstanding my concerns, I find that the agency report contains all of the information required by statute and is reasonable.