



December 2, 2014

BY ELECTRONIC MAIL AND OVERNIGHT DELIVERY

Carolyn N. Lerner
The Special Counsel
U.S. Office of Special Counsel
1730 M Street, N.W., Suite 300
Washington, D.C. 20036-4505

Re: OSC File No. DI-14-2623

Dear Special Counsel Lerner:

This report is submitted in response to the following allegations by Mr. George Johnson concerning the operations of the Smithsonian's Fred Lawrence Whipple Observatory (FLWO) in Amado, Arizona:

- FLWO lacks a required safety coordinator;
- FLWO management did not provide required fall protection, heavy equipment, and crane training; and
- Heavy equipment was not inspected or serviced properly and mandatory accident records were not kept.

The Office of Special Counsel forwarded these allegations to the Secretary of the Smithsonian Institution, G. Wayne Clough, for investigation on July 11, 2014. Pursuant to section 1213(d), of Title 5, United States Code, the Secretary delegated his authority to review and sign this report to the undersigned. We discussed the finding and actions included in this report with Mr. Johnson on November 28, 2014.

General Background and Summary of Information Prompting Investigation

The Fred Lawrence Whipple Observatory is located near Amado, Arizona on Mount Hopkins, and is operated by the Smithsonian Astrophysical Observatory (SAO).

SAO is a constituent research center of the Smithsonian Institution and is headquartered in Cambridge, Massachusetts. The director of SAO, Dr. Charles Alcock, reports directly to the Under Secretary for Science in Washington, D.C.

FLWO is one of SAO's two major land-based telescope facilities; the other is at Hilo, Hawaii. SAO also operates space-based telescopes on behalf of the National Aeronautics and Space Administration (NASA) and other national and international astrophysical organizations. FLWO oversees a visitor center at the base of Mount Hopkins. The visitor center is open to the general public and features displays and exhibits on astronomy and astrophysics, natural science, and cultural history.



Above: Photo of the Very Energetic Radiation Imaging Telescope Array System (VERITAS) telescope on Mount Hopkins. VERITAS. VERITAS and the Multiple Mirror Telescope Observatory (MMTO) are two of the major telescopes at FLWO.

Mr. Johnson's Initial Allegations: Mr. Johnson served as FLWO facilities manager from May 5, 2013 until May 3, 2014. As facilities manager, he was responsible for FLWO operations, including, among other duties, safety, equipment inspections, and the maintenance of buildings and roads. On April 22, 2014, Mr. Johnson was provided notice that he would be separated from Federal service prior to the expiration of his probationary period.

On April 28, 2013, Mr. Johnson sent an email to Secretary Clough and SAO Director Alcock, in which he identified his concerns regarding safety and certain personnel at FLWO and requested a response within three days. At least three of Mr. Johnson's allegations appear related to those referred by OSC: that FLWO lacked a fall protection program,¹ that "safety inspections and maintenance not being performed on critical equipment,"² and that motor vehicle accidents were not being properly reported to senior Smithsonian officials.³

Dr. Alcock replied to Mr. Johnson on April 30, 2014, stating that

¹ According to Mr. Johnson's e-mail, "[t]here is no fall protection program: dozens of SI employees, scientists, post-grads and visitors climb on the telescopes daily without being trained to use fall protection devices. Most do not use the devices at all. FLWO has 1 fall protection trained person who is not qualified to train nor instruct."

² Mr. Johnson further alleged that he had "documents that show the maintenance history of 4 of our large loaders. SI has owned one of the loaders for over 11 years. The loader has NEVER had a formal PM per manufacturers specifications. No wonder the safety systems failed."

³ According to Mr. Johnson, "I have a binder that has dozens of photos of vehicle accidents that have occurred over the last 25 years at FLWO. None of which have I found follow-up reports, investigations, Dept of Labor documents. I found nothing. When I asked the Motor Pool Supervisor about them and the those accidents we had last year, he told me 'we try to stay off the radar so we don't get tangled up in paperwork.'"

Secretary Clough received your email of April 28 and has asked me to respond on his behalf.

Safety of our staff and visitors is the Smithsonian's top priority and we take the concerns you raise extremely seriously. At SAO's request, the Under Secretary for Finance and Administration has mobilized a team of experts from across the Smithsonian and directed them to review your concerns quickly and thoroughly. We have also advised the Inspector General of your concerns and our action plan in response.

Conduct of Investigation

Following Dr. Alcock's e-mail, the Smithsonian assembled an investigation team consisting of staff from central safety, facilities, and human resources offices in Washington, D.C., as well as representatives from SAO's Cambridge headquarters.

The investigation team visited the FLWO site on May 5, 2014 with explicit directions from senior Smithsonian leadership to conduct an impartial and transparent assessment of Mr. Johnson's allegations. The team was divided into two groups: the first was charged with investigating allegations regarding industrial hygiene, safety, and maintenance issues, the second with personnel issues that the Smithsonian does not believe are part of OSC's referral.

The teams interviewed all available and relevant FLWO staff and provided them with a copy of Mr. Johnson's email.⁴ In addition, the team encouraged interviewees to offer any recommendations for better practice in those areas, such as training and safety, identified in Mr. Johnson's email. The investigation team also reviewed vehicles and equipment safety manuals, general and specific safety procedures and checklists for the VERITAS and MMTO telescope operations, FLWO staff personnel safety certification, vehicle safety reports, and injury reports.

Oversight of the teams was conducted by the immediate office of the Under Secretary for Finance and Administration. For allegations not contained in Mr. Johnson's email, but subsequently raised before OSC (i.e., lack of a safety coordinator and mobile crane certification and training), the investigation was coordinated through the Under Secretary's office directly with assistance from the central SAO and

⁴ The following FLWO staff were interviewed in Arizona (positions reflect those held at time of interview):

Grace Alegria, FLWO Administrator
Steve Criswell, VERITAS Program Manager
Emilio Falco, Ridge Telescope Astronomer
Pascal Fortin, Observatory Manager
Robert Hyne, Maintenance Worker
Cesar Lopez, Automotive Worker
Wayne Peters, Electronic Technician
Ricardo Ortiz, Assistant Mountain Operations Manager, MMTO
Emmet Roche, Physical Science Technician
Daniel West, Supervisory Automotive Mechanic
Grant Williams, Director, MMTO

Smithsonian facilities staffs.

On May 6, 2014, the Occupational Safety and Health Administration (OSHA) conducted an unannounced health and safety inspection at FLWO. OSHA was informed that the investigation team was simultaneously conducting its own review. On June 5, 2014, OSHA issued FLWO four citations, including two deemed "serious": inadequate first aid training and an improperly maintained John Deere 644E front loader. The remaining two citations, related to the maintenance of the OSHA 300 log, were characterized as "other than serious." The investigation team has relied on the OSHA citations and the Smithsonian's response for this report.

Summary of the Evidence

- The investigation confirmed the allegation that FLWO **currently lacks a permanent safety coordinator.**
- The investigation confirmed the allegation that FLWO **lacked complete and/or adequate fall protection and/or heavy equipment training** at the time of Mr. Johnson's allegation. The investigation did not confirm any deficiencies in the **training or certification of mobile crane operators.**
- The investigation confirmed the allegation that **the front-end loader maintenance and inspection records were not properly maintained.** Evidence did not support the allegation that **required motor accident reports** were not completed.

List of Any Violation or Apparent Violation of Law, Rule, or Regulation

29 C.F.R. 1960.8(a). Agency General Responsibilities

Specific Investigation Findings and Actions Taken or Planned as a Result

1. **FLWO Lacked a Required Safety Coordinator**

According to the Smithsonian Safety Manual,

Directors of museums and research centers . . . must address the following basic responsibilities . . . and whose training and qualifications meet this established in Chapter 6 "Training, of this Manual. It is recommended that a full-time, professional Safety Coordinator position be fully funded to assist directors in administering their Safety Programs, particularly for organizations larger than 200 employees and/or with complex operations. When a unit consists of multiple facilities in different locations, Directors are encouraged to designate a full-time professional Safety Coordinator with overall responsibilities in a unit.

Safety Manual at 2-5. The Manual also explains that Safety Coordinators have the authority for

developing, implementing and ensuring the administration of the day-to-day Safety Program for their organization, as outlined in this Manual. They shall provide technical assistance on all organizational safety and health, fire protection and environmental

issues and act as the primary point of contact with OSHEM and other SI organizations on these issues. The Safety Coordinators' duties and responsibilities shall include:

1. Advising management on safety and health matters and assisting in setting organizational priorities

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5. Investigating accidents, incidents, or suspected unsafe or unhealthful conditions, within their areas of jurisdiction, and putting into effect corrective measures to prevent future occurrences. Ensuring that such accidents and incidents are properly reported to OSHEM, per the 2120 reporting process or other process as defined in Chapter 7, "Injury/Incident Reporting and Investigation", of this Manual. If warranted, develop annual measurable goals to reduce mishaps.

6. stopping an activity when there is imminent danger.

** * * **

Safety Manual at 2-7, 8. With regard to training, the Safety Manual provides that Safety Coordinators shall:

- 1. Identify, with the assistance of supervisors and the Office of Safety, Health and Environmental Management (OSHEM), employees requiring safety training . . .*
- 2. Develop employee safety training programs to fulfill requirements of this Manual.*
- 3. Assess the effectiveness of the training received, as demonstrated by the proficiencies of the trained employees, during facility safety assessments.*
- 4. Maintain an auditable system of employee training records, for the purpose of ensuring that all staff who require training have received it and are up-to-date with periodic training.*

Safety Manual at 6-1, 6-2.

Currently, 37 safety coordinators are assigned to 48 different Smithsonian units. For many safety coordinators, safety responsibilities are assigned as collateral duties (e.g., 50 percent of time devoted to safety). A separate safety coordinator services each SAO site (Cambridge, Hilo, and FLWO). The central Office of Safety, Health and Environmental Management (OSHEM) in Washington supports unit safety coordinators.⁵

Mr. Johnson correctly noted that FLWO safety coordinator Tom Welsh retired from Federal service on February 2014. OSC Letter at 2. Mr. Welch served as an Electrician/Water Specialist with collateral

⁵ Seven OSHEM staff members are assigned as safety liaisons for FLWO in the areas of occupational safety, fire safety, industrial hygiene, environmental protection, radiation safety, and construction safety.

FLWO safety coordinator responsibilities. He reported to Mr. Johnson.

Following Mr. Welch's retirement and Mr. Johnson's separation, Dr. Marc Lacasse was assigned interim safety coordinator. The investigation team did not find any Smithsonian policy violations in Dr. Lacasse's interim appointment.

The investigation team found the recruitment of a permanent safety coordinator was delayed to allow for the completion and implementation of a comprehensive staffing analysis for FLWO. The final report was transmitted to Dr. Alcock on August 29, 2014 and noted that "staff turnover has resulted in key positions that remain unfilled [including] the lack of an ongoing position with Safety formally allocated to the scope." The report recommended that the safety coordinator function report to the Site Manager to ensure "high visibility" in the organization and that one-half of an FTE be devoted to the function, more than twice that previously allocated. SAO posted a vacancy announcement for the new position on November 24, 2014.

Corrective Actions:

1. **Safety Coordinator Appointment.** SAO posted the position of a new electrician/safety coordinator position for FLWO on November 24, 2014.
2. **Interim Safety Coordinator Training.** Interim safety coordinator appointments that are expected to last more than six months will require the appointee to participate in the core safety training topics. See Safety Manual at 6-19, 20 (matrix of training courses).

B. Lack of Fall Protection, Heavy Equipment, and Crane Training

Fall Protection Training. The Smithsonian Safety Manual provides that "a specific fall protection program shall be provided to each employee who might be exposed to fall hazards in accordance with the requirements of 29 C.F.R. 1926.503." Safety Manual at 10-9. The investigation team reviewed records indicating that, as of May 2014, seven employees had taken fall protection training contrary to the allegation "no fall protection training [was] conducted." OSC Letter at 3. However, the investigation team confirmed Mr. Johnson's allegation that there is no certified fall protection trainer currently at FLWO and that, as a result, fall protection training taught by internal staff was not being offered at that time.

Since Mr. Johnson's separation, FLWO has contracted with that vendor (identified before Mr. Johnson's separation) to provide fall protection training. (Due to staffing constraints, FLWO does not currently intend to conduct fall prevention training internally, but will revisit the possibility in 2015.) The investigation team confirmed Mr. Johnson's allegations that the overall fall protection program, including training, could be strengthened.

Corrective Action:

1. **Fall Protection Training:** Enhanced fall protection training will be provided to all FLWO staff.
2. **Fall Protection Training:** A fall protection program will be developed to cover all FLWO facilities including administrative offices and visitor center. [Fall protection training had previously been targeted to staff maintain the telescope infrastructure.]

Heavy Equipment Training. On June 6, 2014, OSHA issued a “serious” citation to FLWO, stating that FLWO “did not ensure that a John Deere 644E four wheel loader and other four wheel loaders were maintained in accordance with the maintenance and operation manuals for four wheel loaders.” Mr. Johnson also alleged that “none of the four operators who reported to the motor-pool supervisor had proper training in the use of the equipment.” OSC letter at 4. FLWO’s response to OSHA and investigation team confirmed both the lack of recorded maintenance and the training to operate the front loaders.

Corrective Action:

1. **Front Loader Training.** In accordance with the settlement agreement with OSHA, dated July 1, 2014, FLWO conducted loader operation training for staff on July 15, 2014. The program includes training on operating and maintaining all front loaders. FLWO will provide similar training for future staff as necessary. FLWO will require that the operation and maintenance manuals and driver’s checklist be placed in a waterproof sleeve in the front loader cab and that all drivers complete maintenance and operation checklists before use of the vehicle.

Mobile Crane Training and Certification. As noted in the OSC letter, FLWO uses mobile cranes to perform maintenance on building and the Mount Hopkins Road. OSC Letter at 4. Mr. Johnson alleges that no staff member was certified or had the training necessary to operate a mobile crane. The investigation team noted that current OSHA guidance does not require crane operators certification until November 10, 2017. See Federal Register, Vol. 79, No. 187, Pages 57785-57798 (Sept. 26, 2014). The investigative team found that only one staff member is permitted to operate the cranes, that he has been sufficiently trained, and that better documentation should be maintained to reflect relevant crane training.

The investigation team found that an outside contractor inspects FLWO cranes and that central OSHEM staff reviews the inspection records periodically. On September 24, 2014, OSHEM reviewed FLWO inspection records and concluded that they were compliant and complete.

Corrective Action:

1. **Mobile Crane Training and Certification.** FLWO will document all crane training provided to, and by, staff.
2. **Mobile Crane Training and Certification.** FLWO will develop crane operation certification training in anticipation of new OSHA certification requirements effective November 10, 2017.

C. Failure to Maintain Heavy Equipment and Report Accidents

Heavy Equipment Maintenance. The investigation team confirmed Mr. Johnson’s allegations that the heavy equipment front-end loaders were not maintained in accordance with the operation and maintenance manuals. As noted above, OSHA cited the maintenance of the equipment, as well as operator training, as a “serious violation” during its May 5-6, 2014 inspection. As part of the settlement agreement with OSHA to correct the violation, FLWO agreed to take the following corrective action:

Corrective Action:

1. **Heavy Equipment Maintenance.** FWLO follow the maintenance procedures as set forth in the manufacturers' manual for all front-end loaders, including periodic checklists.
2. **Heavy Equipment Maintenance.** FWLO will require all front-load operators to use the manufacturer's operator's checklist before each use of a front-loader. Appropriate training on the checklists was provided to all operators on July 15, 2014.

Accident Reporting. The Smithsonian Safety Manual requires that all vehicular accidents and "near misses" be reported to supervisors and safety coordinators. See Safety Manual at 7-6. Mr. Johnson alleges that "vehicle accidents dating back to 2007 ... were never reported in the Annual Safety and Health Report," and that a "large number of accidents documented by photo were not properly reported to agency management." In addition, Mr. Johnson alleges that Mr. West, the motor pool supervisor, stated that "employees intentionally concealed vehicle accidents to avoid administrative consequences and paperwork." OSC letter at 5.

The investigation team did not find evidence to support these allegations. The team noted that the photo book of accidents relied upon by Mr. West documented both Smithsonian and non-Smithsonian accidents. Contractors and visitor vehicle accidents are not reported to agency management, as would those involving Smithsonian vehicles. Similarly, Mr. West denied the statements attributed to him that staff were discouraged to report accidents.

Although Mr. Johnson's allegations were not confirmed, FLWO will take the following action:

Responsive Action:

1. **Accident Reporting.** Both the FLWO Safety Coordinator and the FLWO Administrator will ensure that all staff are aware of their responsibilities to report accidents to the Administrator.

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On behalf of the Smithsonian Institution, we appreciate the opportunity to submit this response and for Mr. Johnson bringing forward his concerns.

Sincerely,



John K. Lapiana
Deputy Under Secretary for Finance and Administration

cc: Mr. George S. Johnson
Secretary G. Wayne Clough
Smithsonian Inspector General Cathy Helm