NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230

OFFICE OF
INSPECTOR GENERAL

MEMORANDUM

Date: April 30, 1999

To: File I98120035
Thru: Assistant Inspector General for Investigations

From: Special Agent

RE: Closeout – Investigation

Background

See attached Draft Briefing Report dated 01/21/99.

Investigation

See attached Draft Briefing Report dated 01/21/99.

In addition to the information included in the Draft Briefing Report, I attended the NSF site review at from April 26-28, 1999. A significant amount of time was spent during the site review discussing security at the facility. The NSF program and awards officials and personnel are actively seeking measures to mitigate future occurrences at

Conclusions

Based on the fact that there have been no other shots fired at the facility, and the fact that all parties concerned are working to minimize the possibility of future gun fire at the facility, this case is closed.

Shooting Report

Background

The is the single most expensive project funded in the history of the National Science Foundation (NSF). is being built through a cooperative agreement between NSF and . There are two observatories, which must operate in conjunction with each other, one in and the other in The design of the facility, located on the Department of Energy was used in the construction of the facility, located in what was formerly logging property. The property was and is hunted extensively. purchased the property at the location and leased the property to . The U.S. government owns the buildings, equipment, and all improvements to the land at the facilities.

When operational, the facility in will operate with approximately 25 permanent employees and 30 to 35 visiting scientists daily. Currently, has working agreements with universities in Russia, Japan, Italy, France, Germany, Great Britain, and Australia.

On November 24, 1998, construction personnel discovered nine bullet holes in the west-end building of the in what appeared to be deliberate shots at the building. personnel reported the incident to the Sheriff's Office, the FBI Office, the Police Department, and NSF. personnel had discovered other bullet holes at a previous date, but these appeared to be accidental. In addition, personnel have had altercations with a local hunter regarding his claim that he has the right to hunt on property. On January 11 and 12, 1999, NSF-OIG Assistant Inspector General for Investigations and Special Agent traveled to the o coordinate investigative efforts with the Sheriff's Office and the FBI. In addition, NSF Program Manager and Grants Officer requested that and review security at the facility.

Findings and Results of Trip

NSF-OIG personnel met with the Acting Resident Agent-in-Charge for the FBI, the Sheriff, and the Sheriff's Office Chief of Detectives. The group agreed to coordinate efforts regarding any incident at the facility. Sheriff emphasized his willingness to provide a high level of service to the facility. FBI Special Agent offered the assistance of the FBI if needed by the Sheriff's Office. At this time the Sheriff's Office is continuing its investigation into the shootings.

The evidence at the west-end building revealed that the nine shots were fired at a downward trajectory to the building. A tenth shot was fired at an undetermined angle and struck the upper southwest corner of the building. Both Sheriff's Office Detectives and NSF-OIG investigators concurred that the shots were fired from the property to the southwest of the west-end building property, due to the higher elevation of that property. Trees and foliage and the sloping terrain surrounding the facility would have prevented the shots from coming from another location. The Sheriff's Office sent a slug recovered from the interior of the west-end building for analysis. The slug was identified as coming from a .380 or a .357 caliber weapon. Due to the pattern of the bullet holes around the light fixture on the west-end building, investigators concluded that the shooter was targeting the light. (Photographs 1 through 5) See Attachment A for a schematic of the west-end building.

Facility Vulnerabilities

1. Insufficient Construction of the Midway and End Buildings

The facility was constructed with the intent of protecting the vacuum tube from stray bullets during hunting season. As a result, an approximately four inch concrete shell protects the two 2.5 mile legs of the vacuum tubes. However, only polyurethane foam core metal walls protect the end buildings and the midway buildings. Eight of the ten bullets, shot at an angle of approximately 33 degrees to the horizontal plane of the building, penetrated the exterior of the building; two bullets penetrated into the interior of the building. A direct shot would most likely enter the buildings.

2. Doors on the Protective Concrete Tubes Open and Unlocked

The concrete shells encasing the vacuum tubes have metal doors at frequent intervals to permit access to the vacuum tubes. The doors were left open and unlocked to allow access for contractors. personnel initially stated that these doors are closed at night. However, on the second day of the inspection the same doors were open. A door standing open affords direct access to the vacuum tube (Photograph set 6). A shot fired into one of these open doors would penetrate the vacuum tube. In addition, there were many animal tracks, including cattle and deer, around the property. There was a large pool of urine inside one of the doors to the vacuum tube. A large animal such as a cow or deer could cause substantial damage to the vacuum tube should it enter the vacuum tube shell through an open door and become trapped (Photograph 7). personnel informed the investigators that these doors had only been open for a couple of days. However, when investigators identified the open doors and the possible consequences, personnel failed to close the doors. personnel also informed investigators that the locks on the doors are defective and are in the process of being replaced.

Once inside the concrete shell, an individual can proceed to the end buildings, which are only secured with sheet metal and plastic sheeting from the inside of the concrete shell. At the time of inspection the south-end building contained in excess of $100,000 of portable electronic equipment according to [illegible], Head of the facility. (Photographs 8 through 10)

The doors to the concrete shell surrounding the vacuum are hollow and made of 12 gauge (7/64 inch thick) steel. The manufacturer of the doors has not conducted ballistic testing on the doors. However, the company's chief engineer believes that the doors can "probably" stop a bullet striking on the oblique, but that a shot directly the doors would "probably not" prevent a bullet from passing through the doors into the interior.

3. "Bullseyes" on the Concrete Tubes

The concrete tubes protecting the vacuum tube have several round holes approximately six inches in diameter plugged with red plastic. The holes were drilled to allow for heating of the vacuum tube. Several of the holes are positioned so that if a shot were fired into the red plastic discs, it would penetrate the vacuum tube. NSF-OIG investigators and Sheriff's Office detectives surmise that these red, round, plastic caps could prove irresistible targets to vandals. (Photograph 11)

4. Fear of Local Residents

There may be a problem with dissemination of information to local residents regarding the facility, its mission, and research objectives. One local resident made the comment to NSF-OIG investigators and Sheriff's Office Detectives that when he bought his house two years ago, the previous owner was very worried about what was going on at the facility. The resident then asked if he was going to "turn green" from the work being done at .

5. Limited Buffer for Property

The concrete shells encasing the vacuum tubes are located on 150 ft. and 300 ft. tracts of land designated as property. and other property owners control the land outside these 150 ft and 300 ft. tracts of land. The open spaces between the facility and the tree line located on the neighboring properties make the facility vulnerable to an erratic shot.

6. Cattle Fence as Fencing Around Facility

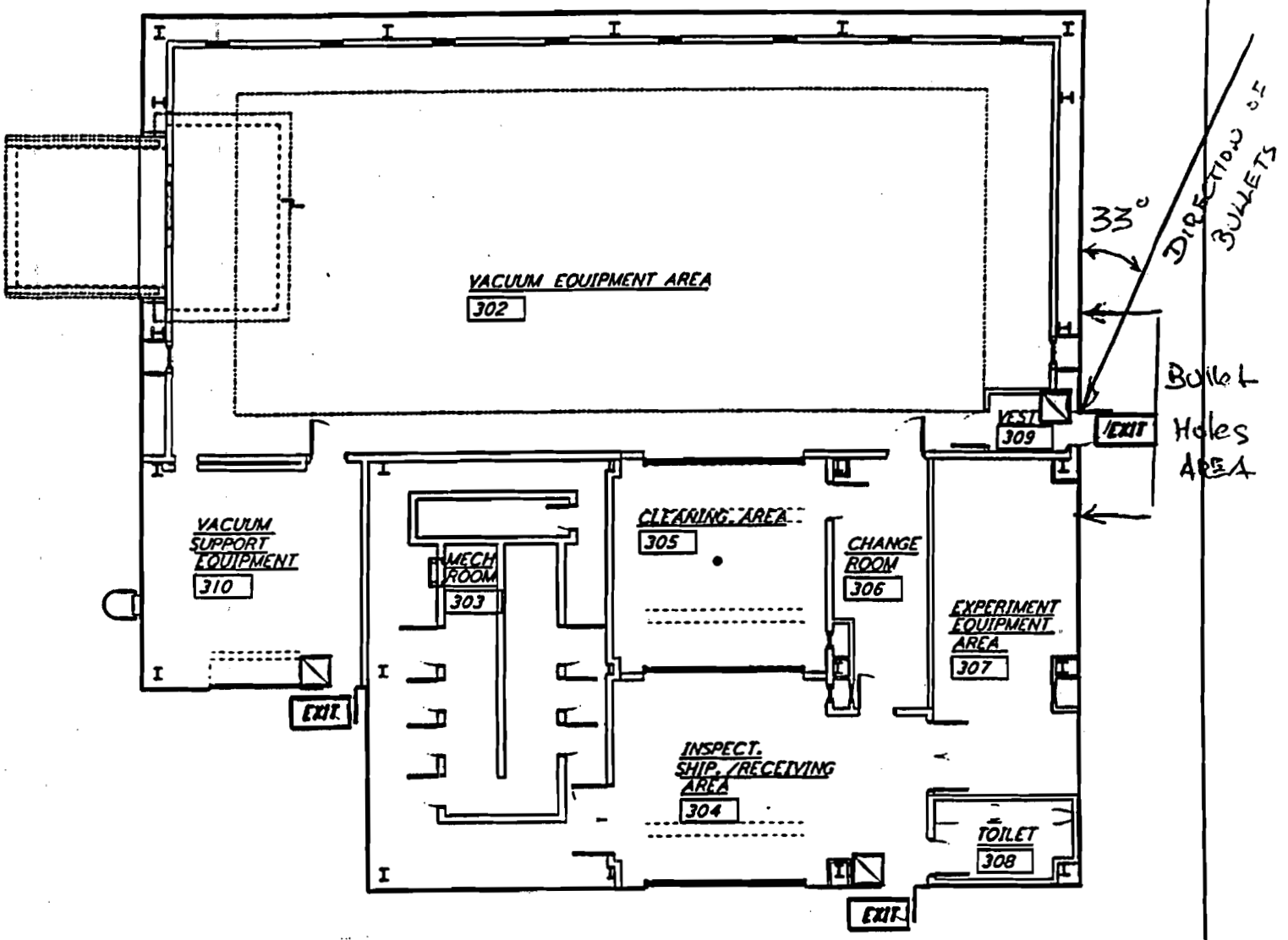
A barbwire cattle fence is the only fence surrounding the property. This fence has been cut several times allowing cattle to enter the property. During the

inspection of the facility, NSF-OIG investigators observed deer run through the fence without hindrance.

7. Access Roads To the Facility

There are currently two access roads to the facility, one permanent and one temporary. Both are unpaved dirt roads. personnel stated that the gates to the roads are closed each night. However, Sheriff's Office personnel stated that the gates have been unsecured during night patrols. The facility is unable to prevent unauthorized people entering the facility. The facility has contracted with a security firm to provide unarmed security for four hours between 6:00 p.m. and mid-night Monday through Friday and for eight hours between noon and mid-night on Saturday and Sunday.

ATTACHMENT A



LEGEND

- MANUAL PULL STATION
- EXIT — EXIT
- 101 — ROOM NUMBER

END STATION "A"