THE SECRETARY OF THE NAVY
WASHINGTON, D.C. 20350-1000

AUG 0 7 2007

Scott J. Bloch, Special Counsel
U.S. Office of Special Counsel
1730 M Street, N.W., Suite 300
Washington, DC 20036-4505

Dear Mr. Bloch:

Thank you for your letter requesting an investigation of alleged defects in the fire alarm system for Building 3232, located on the Naval Base San Diego (NBSD), which could pose a danger to the health and safety of building occupants (Office of Special Counsel (OSC) File No. DI-06-1731).

The inquiry led by the Naval Inspector General substantiated the allegations. Repairs have been made and the system now operates properly. A base-wide alarm system upgrade, which will bring the alarm system up to current code requirements, has been awarded. Systemic issues contributing to the delay in repairs are under consideration. The commands involved have determined disciplinary action is not appropriate.

I am enclosing two versions of the report of investigation. The first contains names of witnesses and is for your official use. I understand that you will provide a copy of this version to the Complainant, the President, and the House and Senate Armed Services Committees for their review.

The second version excludes the names of witnesses and is suitable for release to the general public. As has been the case with other reports that the Department has provided to your office since September 11, 2001, I request that you make only this redacted version available to members of the public.

Again, thank you for bringing this matter to our attention. If I may be of any further assistance, please let me know at your earliest convenience.

Sincerely,

Donald C. Winter

Enclosures

OFFICE OF THE NAVAL INSPECTOR GENERAL

OSC DI-06-1731
NAVINSGEN 20060850
CNIC 06-143

Report of Investigation

12 July 2007

Subj: ALLEGED SAFETY VIOLATIONS AT NAVAL OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL TRAINING CENTER WEST, NAVAL BASE SAN DIEGO, CA

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Suitable for Public Release (names removed)

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Preliminary Statement

1. This report is issued pursuant to a 29 September 2006 Office of Special Counsel (OSC) letter tasking the Secretary of the Navy (SECNAV) to conduct an investigation under 5 USC §1213. It discusses why fire alarm horns and strobe lights in a building used to instruct people in the Navy's Occupational Safety and Health (OSH) program were not repaired until a Navy OSH specialist filed a complaint with OSC four years after the alarms stopped working.

2. OSC is an independent federal agency whose primary mission is to safeguard the merit system by protecting federal employees and applicants from prohibited personnel practices. OSC also serves as a channel for federal workers to make allegations of: violations of law; gross mismanagement or waste of funds; abuse of authority; and a substantial and specific danger to the public health and safety.

3. Reports of investigations conducted pursuant to 5 USC §1213 must include: (1) a summary of the information for which the investigation was initiated; (2) a description of the conduct of the investigation; (3) a summary of any evidence obtained from the investigation; (4) a listing of any violation or apparent violation of law, rule or regulation; and (5) a description of any action taken or planned as a result of the investigation, such as changes in agency rules, regulations or practices, the restoration of employment to an aggrieved employee, disciplinary action, and referral of evidence of criminal violations to the Attorney General.

4. The fire alarms are in Building 3232 at Naval Base San Diego, CA (NBSD). Building 3232 is a 2-story non-combustible

structure used for training and administration. It contains classrooms and offices. The building is approximately 55,000 square feet and does not have a fire sprinkler system. It has a fire evacuation alarm system tied to the Navy Region Southwest (NRSW) Federal Fire Department (FFD) Dispatch Center. During classes, 150 to 200 students occupy the building.

5. Building 3232 houses several organizations including the Naval School of Health Sciences, Navy Medicine West (NSHS) and the Naval Occupational Safety and Health & Environmental Training Center West (The Training Center). It also contains classroom and administrative office spaces for a Dental Clinic that is located in an adjoining Building.

6. The Training Center is the West Coast component of the Naval Occupational Safety and Health Environmental Training Center in Norfolk, VA. Both sites present courses in various aspects of Navy safety, including OSH and fire prevention. The Training Center Commanding Officer (CO) and Executive Officer (XO) are stationed in Norfolk. They visit San Diego every three to six months.

Information Leading to the OSC Tasking

7. The OSC tasking stems from a 2006 complaint stating some Training Center fire alarms are inaudible in the classrooms, which places instructors and students in substantial danger in the event of a fire. OSC identified Ms. Krista Haddon, an OSH specialist at Naval Air Depot (NADEP) North Island, San Diego CA, as the person who provided information causing OSC to task this investigation. OSC said Ms. Haddon, referred to hereafter as Complainant, consents to the release of her name.

8. OSC believed the Training Center was located at NADEP North Island, a few miles from NBSD, because Complainant is now employed at the NADEP. During her October 2006 interview with a Navy investigator, Complainant explained that Building 3232 is actually on NBSD.

9. The OSC tasking letter says Complainant alleged that unnamed management officials failed to take adequate corrective action to repair the Training Center fire alarm system, placing instructors and students in substantial danger in the event of a fire. OSC concluded there was a substantial likelihood the information Complainant provided disclosed a substantial and specific danger to public health and safety.

10. OSC provided the following general summary of Complainant's allegations:

> *Occupation Health and Safety Specialist Krista Haddon alleges that the building fire alarm system is inaudible to the instructors and students when in the classrooms at the Training Center. According to Ms. Haddon, the fire detection system has not functioned properly since a contractor accidentally damaged the system, rendering it inoperable. The inadequacy of the system was confirmed by Mr. OSH-1, Safety Specialist, when he performed a safety inspection on the premises and also by Ms. Haddon, who had the fire department test the system. The only corrective action the agency took, Ms. Haddon asserts, was to post signage explaining what to do in case of a fire and to inform the instructors that, in the event of a fire, they should announce to their students that the building must be evacuated.*

Description of Conduct of Investigation

11. On 29 September 2006, Special Counsel Scott J. Bloch sent SECNAV a letter referring Complainant's allegations, OSC File No. DI-06-1731, for an investigation and report pursuant to 5 USC §1213. On 4 October 2006, the Office of the Naval Inspector General (NAVINSGEN) received the OSC letter through the SECNAV Tasker program and assigned a Case Manager.

12. On 5 October 2006, NAVINSGEN tasked Commander, Navy Installations Command (CNIC) to investigate the allegations. That day, CNIC directed a senior CNIC IG investigator to conduct an on-site investigation.

13. Between 9 and 30 October 2006, the CNIC investigator personally inspected Building 3232; conducted on-site in-person interviews and follow-up interviews by telephone, fax and email correspondence; and reviewed pertinent documents. Appendix A is a list of these documents. Appendix B is a witness list.

14. The CNIC investigator interviewed ten people, including Complainant; supervisory and management personnel at the Training Center; Naval Facilities Engineering Command, Southwest (NAFVAC SW) engineers and NBSD Public Works Office (PWO) personnel[1]; the Commanding Officers of the Training Center and

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[1] Until August 2005, NAVFAC SW was an "Engineering Field Division." It then became a "Field Engineering Command." We use NAVFAC SW to refer to both. The

NBSD; and the NBSD Site Safety Manager, who also works for the NRSW Regional OSH Office.

15. In preparing his draft report, the CNIC investigator used 29 CFR 1910.36(b)(7) as the allegation standard because Mr. OSH-1 cited it in two deficiency notices describing the hazard. This provision states:

> In every building or structure of such size, arrangement, or occupancy that a fire may not itself provide adequate warning to occupants, fire alarm facilities shall be provided where necessary to warn occupants of the existence of fire so that they may escape, or to facilitate the orderly conduct of fire exit drills.

16. The CNIC investigator reported the Training Center had posted notices and established a standard operating procedure (SOP) for instructors to announce fires and direct evacuations. He thought the "warning system" appeared adequate to allow escape and facilitate the orderly conduct of fire drills. Therefore, the CNIC investigator concluded 29 CFR 1910.36(b)(7) was not violated, although he observed this may have been due only to the fortunate coincidence that there had been no fires in Building 3232.

17. The NAVINSGEN staff asked subject matter experts whether 29 CFR 1910.36(b)(7) was the most appropriate standard to use. They said the CFR is a "30,000 foot level" instruction implemented within DoD by criteria that provide more detail and require compliance with National Fire Protection Association (NFPA) publications such as NFPA 72, the National Fire Alarm Code. Based on their advice, NAVINSGEN decided a more appropriate standard is NFPA 72, Chapter 10, Inspection, Testing and Maintenance, paragraph 10.2.1.2.2, which states that fire alarm "[s]ystem defects and malfunctions shall be corrected."

18. The experts also explained that OPNAVINST 5100.23F, the Navy Safety and Occupational Health (NAVOSH) Program Manual[2], required the implementation of "interim controls" until the alarms were repaired. They said paragraph 4.6.3 of NFPA 72 requires those interim controls or mitigating measures be approved by an individual identified as "the Authority Having Jurisdiction" (AHJ). In this case, they identified Mr. FACSW-1,

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PWO is now the Public Works Department or PWD, but for consistency we use PWO throughout the report. The NBSD Public Works Officer is the head of the PWO.

[2] On 30 December 2005, OPNAVINST 5100.23F was replaced by 5100.23G.

the senior fire protection engineer assigned to NAVFAC SW, as the AHJ who should have approved the interim controls.

19. In February 2007, after changing the standard and revising the draft report of investigation, NAVINSGEN asked NBSD and the Training Center for comments. NBSD asked a NRSW IG investigator to interview other people and conduct another record review to develop information that might explain the delay in repairing the system. Between March and May 2007, the NRSW investigator and NAVINSGEN identified other witnesses and interviewed them by email and telephone. The NBSD Deputy Public Works Officer found more records and provided technical advice and support to NAVINSGEN and the NRSW investigator. His efforts, and those of the NRSW investigator, were invaluable and greatly appreciated.

20. Based on all the information developed during the investigation, including extensive consultations with subject matter experts, NAVINSGEN formulated three allegations:

> Allegation One: That management personnel at NAVOSH Environmental Training Center West, San Diego, CA, and at Naval Base San Diego, CA failed to implement adequate interim control measures pending repairs to the fire alarm system, as required by NFPA 72, Chapter 4, Paragraph 4.6.3.
>
> Allegation Two: That management personnel at Naval Base San Diego, CA failed to repair an impaired fire alarm system in Building 3232, as required by NFPA 72, Chapter 10, Paragraph 10.2.1.2.2.
>
> Allegation Three: That management personnel at Naval Base San Diego, CA failed to document the interim controls and plan to finally abate the hazard caused by the inoperable alarms and strobes, as required by Chapter 12 of the NAVOSH Program Manual.

21. NAVINSGEN concludes all three allegations are substantiated. The SOP the Training Center put in place as the interim controls to warn occupants of fire pending completion of repairs, although reviewed by the NBSD Safety Office, did not comply with applicable Navy instructions in form or substance. NBSD, acting through its PWO or NAVFAC agents, should have repaired the alarms a few months after Mr. OSH-1 first reported the hazard in December 2003, but did not make effective repairs until the start of the investigation. The deficiency notice posted in the Training Center was not updated to reflect interim controls or the hazard abatement plan. The proposed project to

replace the alarms during the base-wide upgrade was not identified in Region or NBSD hazard abatement plans available for Commanding Officers to review.

22. Upon learning of the deficiency in October 2006, the NBSD Commanding Officer immediately directed alarm system repairs. They were completed in November 2006 at an approximate cost of $9,000. Despite these repairs, which restored the alarms to operating condition, the alarm system remains out-of-date and needs modernization. A proposed base-wide alarm system upgrade, originally estimated to cost $4.7 million, was on hold for three years but approved for award in February 2007. This work will bring the Building 3232 Alarm System up to current standards. By letter of 28 June 2007, NAVFAC SW awarded a $5,778,632 contract for the upgrade to Halbert Construction Company of El Cajon, California.[3] The letter says the completion date is to be no later than 13 November 2008.

23. NAVINSGEN was unable to determine why the repairs, which turned out to be simple and inexpensive, were not accomplished for more than four years and then only after OSC intervention. No evidence suggests anyone deliberately ignored the problem, but several factors contributed to a fog of confusion and miscommunication that may have hampered repair efforts:

- First, the reporting process tenants must use to get NBSD to make repairs is confusing and ineffective;
- Second, safety organizations such as the OSH Office and FFD, while conscientious in identifying hazards, are not coordinated and do not elevate findings to Commanding Officers who are accountable for abating hazards;
- Third, Navy lacks sufficient resources to fund repairs as hazards are identified and must prioritize repairs based on hazard severity;
- Fourth, the Public Works Officer declined to undertake repairs to the Building 3232 alarms in late 2005, anticipating the award of a separate base-wide project that would replace them, but did not inform the NBSD CO of the hazard or her decision; and

[3] The cost estimate grew to $7.4 million, primarily due to increased material costs, which required an additional level of approval before award.

- Finally, NRSW and NBSD have not executed safety support agreements with each other and maintenance support agreements with tenants required by Navy instructions that might have ameliorated the impact of the factors identified above.

24. The detailed finding of facts supporting the foregoing summary of NAVINSGEN opinions and conclusions follow.

Summary of Evidence Obtained During Investigation

Findings

Organizational Relationships

25. NBSD is homeport to nearly a third of the Navy's fleet in the Pacific theatre. Established in 1922 as the U.S. Destroyer Base, San Diego, and renamed Naval Station San Diego in 1946, it was the home of the Eleventh Naval District and commonly called the 32nd Street Naval Station until, as part of the regionalization process that started in San Diego in 1998, it was renamed NBSD and became the site of the NRSW headquarters.

26. Regionalization of the San Diego metro area facilities programs, including safety, began in 1998 under Installation Claimant Consolidation (ICC) Phase I. The consolidated organization became NRSW in 1999. Within the region, NBSD is one of several activities that report to NRSW. It provides various forms of installation management services and coordination of base operating support (BOS) functions, including safety and fire protection.

27. CNIC was established in 2003 to coordinate region activities. It reports to the Chief of Naval Operations (CNO). The CNIC Public Safety Office is responsible for regional issues related to such BOS functions as safety and fire protection services. The alignment of such safety functions in CNIC is intended to: create efficiencies by organizational alignment; target areas for improvement; and prioritize investment. The CNIC official website states the Public Safety Division also serves as the Budget Support Office for Navy installation support and the CNO point of contact for installation policy and program execution.

28. During the relevant time period, from the Summer of 2002 until October 2006, three different organizations performed construction, maintenance, and general building upkeep functions

for NBSD. For much of this time, each reported to a different Commanding Officer. The Resident Officer in Charge of Construction (ROICC) reported to NAVFAC SW. The Public Works Center San Diego (PWC) reported directly to NAVFAC in Washington DC. The PWO reported to the NBSD Commanding Officer.[4]

29. NBSD "owns" most buildings on NBSD, including Building 3232, and consequently is the "landlord" responsible for maintenance and repairs in buildings occupied by "tenants" such as the Training Center. Paragraph 0304 of OPNAVINST 5100.23G requires regions and Activities to establish written agreements such as an Inter Service Support Agreement (ISSAs) or memorandum of understanding (MOUs) with each other and tenant commands. The ISSA or MOU describes the terms and conditions under which the region or activity provide such services as building maintenance and safety, including fire protection. For reasons discussed later in this report, there is no ISSA, MOU, or other written agreement between NRSW and NBSD, or between NBSD and the Training Center currently in effect.

30. NBSD maintains and repairs building systems (HVAC/Fire Protection/Alarms, etc.) by providing funds to the PWC through Recurring Maintenance (RM) packages sent to the PWC in-house Recurring Maintenance Shop. The PWC employs technicians who can perform maintenance and repairs. NBSD funds RM at the beginning of the fiscal year to cover all preventive maintenance (changing belts, oiling fans, testing systems, etc.) and repair work to the systems performed under RM work orders.

31. The PWO administers the RM program for NBSD. For RM work orders, PWC technicians may perform repairs that cost up to $1,000.00 without express PWO approval. Should it appear repair cost will exceed $1,000.00, technicians first must obtain PWO approval. Mr. PWO-9, the PWO Deputy Public Works Officer, said the approval process is a mechanism to keep track of funds; the PWO usually authorizes repairs costing more than $1,000.00 upon request. He noted that for a limited time before October 2004, PWO had allowed PWC technicians to spend as much as $45,000 without advance approval under a special program.

32. For more complex or expensive repairs, the PWO can issue "corrective" work orders. While the PWC may perform some

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[4] In August 2005, the PWC merged with NAVFAC SW. In January 2006, the PWO was renamed the Public Works Department (PWD) and also moved under NAVFAC SW, although daily operational control remained with NBSD. To avoid confusion, we refer to PWD as PWO in this report.

corrective work, other corrective work is performed under contract.

33. NRSW and NBSD have a building maintenance program that is implemented by NRSW instruction. The program establishes a tenant "Building Monitor" and a PWO "Tenant Liaison Officer" (TL Officer), who usually is a junior Civil Engineer Corps Officer responsible for coordinating the needs of many tenants at multiple locations. When the tenant needs repairs or maintenance support, the Building Monitor is expected to call the "trouble" or "service" desk or the TL Officer. The trouble desk or TL Officer is responsible for getting a recurring maintenance or corrective work order into the work order tracking system, called MAXIMO, and for providing the tenant a work order number. Once a work order is in MAXIMO, PWO and PWC personnel can track it until the work is completed.

34. Two NRSW organizations share inspection responsibilities that are pertinent to this case. The San Diego Metro Area Federal Fire Department (FFD) has a Prevention Unit that conducts fire drills and inspects NBSD buildings. Chief FFD-1 is the Assistant Fire Chief working in the Prevention Unit. The regional and NBSD OSH Offices inspect NBSD buildings under the Navy OSH program. The senior position in the NRSW OSH program office was vacant while this investigation was in progress. Mr. NRSW-2, the Metrics Department Program Manager for CNRSW Safety was temporarily appointed to serve as the acting NRSW OSH Program Manager for 120 days, and has served as the NRSW OSH Office point of contact for this investigation. Mr. OSH-2 is the NRSW OSH employee who serves as the NBSD "site safety officer" or "manager." Mr. OSH-2 works for Mr. NRSW-2, but also has reporting responsibilities to the NBSD CO.

35. NBSD agrees the PWO was responsible to ensure the fire alarm system was repaired. NBSD maintains that due to confusion over roles and responsibilities caused by regionalization, the PWO did not learn of the inaudible alarms until May 2005, when it took steps leading to repairs that appeared to correct the deficiency but were not sufficient for FFD inspectors because not all of the alarms were returned to operating condition. NBSD asserts that while people in the FFD, OSH Offices, ROICC or PWC may have known of the alarm problems before May 2005, this does not mean PWO personnel knew about it.

36. The evidence establishes, however, that the OSH Office asked the PWO to repair the alarms as early as November 2004. At that time, the PWO thought a proposal to award the base-wide

alarm system upgrade contract was about to be approved and funded. Therefore, it rebuffed efforts to repair an antiquated and unreliable system or replace it apart from the larger upgrade project. This decision appeared reasonable when made, but each passing year without funding approval or a separate PWO led alarm repair effort rendered it increasingly questionable.[5] The evidence also establishes the July 2005 partial repairs did not result from PWO action, but were part of a routine PWC preventative maintenance program. After those repair efforts, the alarms dropped out of the PWO view even though the OSH office and FFD continued to report inoperable alarms.

Training Center ISSA with Host Command

37. OPNAVINST 5100.23F was in effect between July 2002 and December 2005. Paragraph 0304 entitled Regional and Consolidated OSH Organizations, states, in pertinent part:

> In some cases, it may be more effective and practical to establish a single OSH organization to meet the aggregate requirements of a number of small activities within the same geographic area and/or to support tenants of an installation....
>
> a. Activities furnishing OSH services and users of those services, shall establish written agreements. The agreement shall specify the services provided. Administrative control over the OSH organization shall rest with the command supplying the service.
>
> b. Activities should not change consolidated OSH organization services without prior negotiations between the activities and/or units receiving services. Organizations shall negotiate agreements on a fiscal year or an as needed basis, at which time adjustments shall be made to take into account differences in size or number of activities serviced, services required and cost of operation of the consolidated OSH organization.

38. OPNAV Instruction (OPNAVINST) 5100.23G is the current version of the NAVOSH Program Manual. It became effective on 5 December 2005, two years after CNIC was established in 2003.

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[5] In hindsight, it appears the installation of another alarm control panel, estimated to cost $5,000 in March 2004, or a less expensive booster panel that was already installed, would have been sufficient to make effective repairs, provided the alarms were wired correctly. Once the alarm horns and strobes were wired properly in November 2006, they operated as intended.

Paragraph 0304, "Regional and Consolidated Safety Services," states:

> Regionalization of safety services was established to meet the aggregate requirements of a number of activities within the same geographic area and to support tenants of an installation. Region Headquarters shall staff their consolidated safety organizations following the criteria described in section 0303.
>
> a. Regions providing safety services and commands that receive those services, shall establish written agreements such as an Intra Service Support Agreement (ISSA) or memorandum of understanding (MOU). The agreements shall specify the services provided and the conditions under which they are provided. Administrative control over the region safety organization shall rest with the region Headquarters Command.
>
> b. Command/Activities shall negotiate agreements on a fiscal year or an as needed basis, at which time adjustments shall be made to take into account differences in size or number of activities serviced, services required, and cost of operation of the regional safety organization.

39. Mr. PWO-9 said there is no ISSA, MOU, or other written agreement between the Training Center and NBSD, although there is an ISSA between NBSD and Navy Medicine West, another Building 3232 tenant. He said NRSW personnel informed NBSD that CNIC directed regions not to establish ISSAs or MOUs because under the Base Operations Services (BOS) concept CNIC has established, the region provides all safety and building maintenance services and a written agreement for the provisions of these services is unnecessary. Mr. NRSW-2 confirmed Mr. PWO-9' statements, but neither was able to provide any CNIC writing that expressly sets forth the CNIC position on this matter.

40. Mr. TC-5 has been a Department Head at the Training Center since 1995 and now is the Executive Director. Mr. TC-4 has been on the Training Center staff since 1998 and is now the Facilities Manager.

41. Mr. TC-4 provided a copy of a NBSD letter dated 22 September 1998 that forwarded to the Training Center a draft ISSA. At that time, the Training Center was still on North Island, and had an ISSA with Naval Air Station, North Island, its "host" command. The NBSD letter said that due to

"Installation Claimancy Consolidation" (regionalization) NBSD was rewriting ISSAs to reflect that it would become the Training Center's host command.

42. According to Mr. TC-5, CAPT TC-6, who was then the CO of the Training Center, signed the document and sent it to Mr. TC-5, who hand carried it to NBSD. Mr. TC-5 has never seen a copy of the 1998 ISSA that NBSD may have signed.

43. Mr. TC-4 provided a copy of a NRSW letter to the Training Center dated 21 June 2000 that approves a Training Center request to move to NBSD and assigns space in Building 3232. The letter states a new ISSA, with NRSW, will be issued "to reflect all changes," but it only forwarded another copy of the 1998 draft ISSA between NBSD and the Training Center.

44. Mr. TC-5 provided a 7 September 2000 letter from the Training Center to the region that was intended to clarify the respective responsibilities of the organizations, and what the Training Center was to pay for base operating services NRSW was to provide. He said the Training Center signed the ISSA again, and sent it to NRSW. He does not know what NRSW did with the ISSA, but says he has operated under the assumption that NRSW signed it since the Training Center did move into Building 3232 on NBSD.

45. The NBSD draft ISSA addresses many services, including maintenance and safety, the host provides the tenant. Fire Protection services, including inspection and repair of fire alarm system, are an enumerated landlord responsibility.

46. In July 2007, the NRSW resource management office provided a signed copy of a Support Agreement between the Training Center and NRSW that was signed by both parties in late 1999, with an effective date of 1 October 1998. This document is similar, but not identical, to the 1998 ISSA provided by Mr. TC-5. The NRSW Resource Management office says it considers this agreement to still be in effect, even though it has not been updated to reflect the Training Center relocation or any changes in reimbursement that may have occurred.

47. Mr. PWO-9 researched the 1999 ISSA and sent NAVINSGEN an email containing the following information:

> When the Training Center's [1999] ISSA was put in place they were located at Naval Base Coronado (NBC). This grouped their ISSA with the NBC's ISSA database in eKM (a

web based Community Management site) not in the Naval Base San Diego (NBSD) database. When the Training Center relocated to NBSD the ISSA likewise should have been moved in eKM. That didn't happen for various reasons. At the time of the move, the dust was still settling from the Claimant Consolidation that stood up Naval Region South West (NRSW). At the same time, Commander Naval Installation Command (CNIC) was being stood up (which incorporated NRSW into its COC). As a result, [the] organization which would have transferred the ISSA in eKM was overloaded and short staffed as they scrambled to reflect the organizational/business changes in the regional ISAs/MOAs/MOUs. The shift from NBC's database to NBSD's database never occurred and without the ISSA being located in the NBSD database the PWO would not be aware of it's existence.

48. The CNIC Comptroller and Deputy Controller reviewed the 1999 Training Center ISSA in July 2007 at NAVINSGEN's request. They said the document is out of date and includes services that CNIC Regions no longer provide. It should have been renewed, or reviewed, annually, and certainly at least every three years.

49. NAVINSGEN finds the Training Center and NBSD personnel did not have a copy of the 1999 ISSA and didn't even know it existed. NAVINSGEN also finds the language in the ISSA that addresses OSH matters is perfunctory at best, saying little more than the parties shall comply with the NAVOSH Program Manual. It would have not assisted in the resolution of any the disagreements between the Training Center and the OSH office discussed in this report. Consequently, NAVINSGEN concludes there is no effective ISSA between the Training Center and NRSW or NBSD. This confusion over the existence of a written agreement is one of many misunderstandings and miscommunications encountered during this investigation.

Summer 2002 - Inaudible Alarms Discovered and Reported

50. Mr. TC-5 has known of the problem with the fire alarm horns and strobes from the time they stopped operating. He recounted that one day in 2002 all of the alarms in Building 3232 suddenly began sounding, then went silent. At the time, a contractor was renovating first floor administrative offices in Building 3232 belonging to the Dental Clinic. Because of the nature of the

sound, Mr. TC-5 believes the contractor cut some wires that power the alarms.[6]

51. Mr. TC-5 immediately contacted the ROICC, who was responsible for overseeing the renovation contract. He could not persuade the ROICC or the PWC to address the problem before closing out the contract.[7]

52. Mr. TC-4 also learned of the damaged alarms in the Summer of 2002. He confirmed Mr. TC-5's recollection of events surrounding damage to the alarm system and the initial attempts to get it repaired through the ROICC. Like Mr. TC-5, he attributed the damage to contractor error. He is certain the contractor cut the main power cable to the alarm panel.

53. Mr. TC-4 said that although power was restored, alarm horns and strobes in Training Center spaces on the second floor no longer functioned. He believes the ROICC signed off on the contractor's work as satisfactory even though horns and strobes in the Training Center's area of the building did not operate. Mr. TC-4 believes the ROICC made no effort to get the contractor to make, or pay for, repairs to restore the alarm system to a working condition.

54. The ROICC responsible for the renovation contract was not identified or interviewed during this investigation. NAVINSGEN finds the testimony of Mr. TC-5 and Mr. TC-4 is credible. Consequently, NAVINSGEN finds Training Center personnel notified the ROICC of the inoperable alarms while the renovation contract was still open. NAVINSGEN finds the ROICC failed to address their concerns before closing the contract.

2003 Training Center and Fire Department Repair Efforts

55. Mr. TC-4 said he is the Building Monitor for the Training Center portion of Building 3232. He says he contacted the TL Officer every year starting in 2003 in order to get the system repaired. He acknowledges there are no records of his contacts and attributes the absence of records to computer hard drive

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[6] As discussed below, technicians who performed repairs in July 2005 and November 2006 found no cut wires. As explained later, it is more likely the alarms were improperly wired and the renovation contractor overloaded the system by adding new alarms without connecting them to a new alarm panel.
[7] As noted, the ROICC and PWC reported to NAVFAC. There is no evidence indicating anyone contacted the PWO at this time.

crashes at the Training Center during the transition to the Navy Marine Corps Internet (NMCI) computer network.

56. Mr. TC-4 said a technician from the PWC did examine the fire alarm system in 2003, but determined that repairs could not be made within the time allowed for a service work request under the recurring maintenance program (according to Mr. TC-4, 16 hours), so the technician did nothing.[8]

57. The NRSW investigator obtained reports and emails from the FFD. A 7 July 2003 FFD Fire Drill Report states "...Most of BLDG 3232/ ½ of BLDG alarms did not alarm (south wing).... Need to have alarm system tasked for all of 3232. ½ of BLDG does not work. Contractor cut alarm line 1 ½ years ago as per NUU." The signature of the inspector is not legible, but, as indicated below, it was probably Mr. FFD-4, a FFD Inspector.

58. In an email to Chief FFD-1 that was probably sent on 7 July 2003[9], Mr. FFD-4 said he had just phoned "Mr. PWC-4" and "notified him of the fire drill I held at building 3232 on July 7, 2003." The email continues:

> I discussed the fact that only half of the building fire alarm system worked and would Mr. PWC-4 check the fire alarm system out and find out why only half of the building worked. As we discussed that the manager from Navosh told us the contractor that renovated the dental side cut the wiring for the half that was not redone. TC-6 at 767-6030 called a trouble chit in at 10:00 on July 7, 2003 to the trouble desk. Mr. PWC-4, the alarm tech said he would check it out as soon as they get the chit and charge it to the re-occurring account. ... Don.[10]

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[8] As noted earlier, for some time before 2005, PWC technicians could spend up to $45,000 on repairs without specific authorization from the PWO. However, Mr. PWO-9' examination of PWO and PWC work order records, including recurring maintenance, did not reveal a 2003 work order for the alarms.

[9] The only record of the email found is a printed copy that contains no date.

[10] Mr. PWO-9 could find no chit (work order) for this time frame. The evidence suggests "Mr. PWC-4" is Mr. PWC-4, a PWC alarm technician working for Mr. PWC-1 in the PWC. Mr. PWO-9 says "Mr. PWC-4" should not have waited for TC-6 to submit a trouble chit (work order); he could have submitted a discrepancy report to his supervisor, Mr. PWC-2, who would open a corrective work order against the Recurring Job Order funded by the PWO at the beginning of the fiscal year). Mr. TC-5 and Mr. TC-4 say TC-6, who called in the request for repairs, was not assigned to the Training Center. The phone number given in the email now belongs to Navy Medicine West, another building

59. Also on 7 July 2003, Chief FFD-1 sent an email to FFD-5, who also worked for the FFD, stating:

> This morning...Fire Inspector FFD-4 conducted a fire drill in Bldg 3232, Naval Station. The signal was received at Fire Station 6 and the king fisher unit. Federal Dispatch did not receive the signal. Master Box 4453 is tied into Bldg 3232. Can you check and get back with me so we could do another test of the master box?

60. NAVINSGEN found no evidence of attempts to repair the alarms based on the FFD efforts in 2003. However, the technician Mr. TC-4 says looked at the alarms in 2003 may have been responding to FFD and/or TL Officer requests.

61. NAVINSGEN finds the Training Center and FFD took reasonable steps, in accordance with applicable procedures, to address the problem. It also appears that Navy Medicine West, which does have an ISSA with NBSD, attempted to assist the Training Center. NAVINSGEN finds the PWO failed to respond to these efforts.

December 2003 - First OSH Deficiency Notice

62. Mr. TC-5 decided to "self-report" the inaudible fire alarms to Mr. OSH-1 at some point in 2003, hoping that he would conduct a formal inspection and issue a deficiency notice the Training Center could use to focus attention on the issue.

63. Mr. OSH-1 was a Safety Specialist for Navy Region Southwest (NRSW) from 2003-2005. He then transferred to NAVFAC SW, where he now performs the same function. He told the investigator that in late 2003 someone told him the alarms in Building 3232 did not operate. He conducted a routine safety inspection of Building 3232 in December 2003 and observed the defects, which included alarms that did not sound and strobe lights that did not flash.

64. Mr. OSH-1 used a "NAVOSH Deficiency Notice" (NDN), OPNAV Form 5100/12, to document the deficiency. A sample of this form appears in Appendix 9-B of OPNAVINST 5100.23F, and is reproduced in Appendix F. There are three sections to the form. Section A, Deficiency Information, is used to describe the hazard. Section B, Abatement Status, is used to describe the interim

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tenant. The Navy Medicine West Building Monitor said it has no records on Building 3232 fire alarm issues.

controls and the final abatement plan or project. Section C, Comments, is reserved for comments and recommendations.

65. The notice Mr. OSH-1 prepared is NDN number NS 4089, dated 16 December 2003. Mr. OSH-1 gave the NDN to Mr. OSH-2, who posted it on the Training Center notice bulletin board, as required by OPNAV 5100.23F. Mr. OSH-1 also placed a copy of the NDN in the OSH Office files, and created an entry in a software application, NAVOSH Tools, that NRSW and NBSD used to track hazards at that time.

66. In Section A of the notice, Mr. OSH-1 cited a violation of 29 CFR 1910.36(b)(7) and paraphrased it, stating:

> ...in every building or structure of such size, arrangement or occupancy that a fire may not itself provide adequate warning to occupants, fire alarm facilities were not provided where necessary to warn occupants of the existence of a fire so that they may escape, or to facilitate the orderly conduct of exit drills.

67. Based on what Mr. TC-5 told him, Mr. OSH-1 wrote:

> Electrical service had been terminated during contractor renovation work performed on the first floor in fiscal year 2002.

68. Mr. OSH-1 also recorded in Section A that 200 employees are "exposed" to the risk, the hazard severity is II (critical), the mishap probability is C (possible to occur in time), and the Risk Assessment Code or RAC is 3 (moderate). He said "Supervisor/Employees have been notified of the hazard associated with this deficiency" in the space for interim controls. He left the area that describes the abatement plan blank, and included no comments.

69. The NAVOSH Program Manual describes the procedure for conducting Hazard Assessments such as the inspection performed by Mr. OSH-1.[11] This OPNAV instruction describes a process to express a degree of risk, known as a Risk Assessment Code or RAC, based on the severity of an event and the probability of its occurrence. The RAC is used to prioritize work performed to correct hazards because Navy does not have funds sufficient to

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[11] Version "F" of the Program Manual, OPNAVINST 5100.23F, was in effect until 30 December 2005, when it was replaced by version "G." Pertinent provisions of OPNAVINST 5100.23F and 5100.23G are in Appendices F and G.

correct every hazard immediately upon discovery. There are five RAC levels: (1) critical; (2) serious; (3) moderate; (4) minor; (5) negligible.

70. The instruction divides severity into four categories: catastrophic (may cause death); critical (may cause severe injury or severe occupational illness); marginal (may cause minor injury or minor occupational illness); or negligible (probably would not affect personnel safety of health but is nevertheless in violation of a Navy OSH standard). It divides probability into four subcategories: likely to occur immediately; probably will occur in time; possible to occur in time; unlikely to occur. The intersection of "hazard severity" and "mishap probability" produces a RAC level, as shown in the table reproduced in Appendix F.

71. Mr. OSH-1 said he thought the deficiency should be a RAC 2, meaning it was "Serious," based on his reading of the risk matrix in the NAVOSH Program Manual. However, his supervisor, Mr. OSH-2, a Safety Specialist serving as the region's Site Safety Manager for NBSD, told him to change it to a RAC 3 (Moderate). Mr. OSH-1 recalled that Mr. OSH-2 told him assigning a RAC 2 would cause more attention and work to be devoted to the problem than the risk warranted.

72. Mr. OSH-2 said he thought the inoperative fire alarms posed no "imminent threat" and it was appropriate to take interim control measures established by the SOP into consideration when deciding what RAC to assign.[12]

73. Mr. OSH-2 said he did not tell Mr. OSH-1 assigning a RAC 2 would cause more attention and work to be devoted to the problem than the risk warranted. He says he told Mr. OSH-1 that with interim controls in place, a RAC 3 was sufficient.

74. According to Mr. OSH-2, NDNs are sent to the command where the deficiency is found and that command (in this case a NBSD tenant), is responsible for setting forth the interim controls and plan for final abatement in Section II of the NDN. Mr. OSH-2 also asserts the tenant is required to contact the PWC and

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[12] NAVINSGEN does not read OPNAVINST 5100.23F or 23G to indicate interim countermeasures should be included in the RAC level assessment. None of the experts NAVINSGEN consulted agree with Mr. OSH-2's interpretation, either. However, as discussed below, Mr. NRSW-2 states it is common Region practice to "re-RAC" a hazard down after establishing interim controls and provided screenshots from NAVOSH Tools showing how this is recorded in the application.

obtain a work order number and cost estimate for repairs, even though the tenant may not have to pay for the repairs.[13]

75. Training Center personnel did not complete Section II of the NDN, contact the PWC to make arrangements for the repair work to be done, or obtain a work order. Mr. TC-5 explains that in 2003, he did not know a tenant command was expected to do any of these things, because it was not responsible for making, or paying for, the repairs. Mr. TC-4 states that, in accordance with the Building Monitor program, he had been contacting the PWO Tenant Liaison for some time, but was unable to get a work order or obtain other assistance.

76. Tenants such as the Training Center are not able to create work orders directly in the electronic work order tracking system (called MAXIMO), but must rely on the PWO TL Officer or the "service" or "trouble" desk to input work order information and provide the work order number to them.

77. Although he could not provide copies, Mr. OSH-1 stated he sent a "30-day" notice to the Training Center in follow-up to his original NDN because the Training Center had not returned the NDN to him with the portion of the notice describing action taken to address the deficiency (the interim controls) filled in. Mr. TC-5 and Mr. TC-4 acknowledge receipt of the notice, but said they did not think they were responsible for doing anything with the NDN other than to post it on the Training Center bulletin board. They said no one told them they were expected to fill out any part of the document and return it to the Safety Office. They thought NBSD was responsible for doing that, since, in their opinion, NBSD was financially responsible for repairing the fire alarm system under the ISSA they assumed NBSD had signed in 2000.

78. Mr. TC-5 said that sometime after receiving the NDN, Training Center personnel decided to conduct a fire drill to see what they would do in the absence of a fully functioning alarm system. As part of this effort, they established a Standard Operating Procedure (SOP) for actions to be taken in case of an emergency leading to mandatory evacuation. The SOP included posting signs warning of the lack of audible alarms and requiring staff personnel to personally notify each classroom if an emergency arose.

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[13] The experts agree the landlord, NBSD, should complete Section II of the NDN and obtain the work order to effect repairs, but NAVINSGEN finds the instruction language is somewhat ambiguous.

79. Mr. TC-4 said the interim controls the Training Center took to address the fire alarm system defects consisted of instructor training, use of the SOP, and the posted signs. He stated that the actual repair work, under the CNIC organization, was the responsibility of the "landlord," NBSD.

80. Mr. OSH-2 believes the Training Center did document the SOP on the December 2003 NDN and return it to the OSH Office, but was unable to provide a copy of the NDN with that information on it. Mr. OSH-2 provided NAVINSGEN a copy of a notice that was posted on various Training Center walls, but that notice appears to be the one Complainant prepared in response to the deficiency notice Mr. OSH-1 issued in October 2004, discussed below.

81. NAVINSGEN asked Mr. OSH-2 to discuss the hazard abatement plan OPNAVINST 5100.23F and G require an activity or regional OSH to create. He said the OSH Office assembles deficiency notices and places them in rank order by RAC level. Progress on each notice is monitored and tracked until corrective work is performed and the notice is closed out. At that point, the notice is removed from the hazard abatement plan. Mr. OSH-2 said he is unable to view historical data about a deficiency notice once the notice is closed in the software application.

82. In June 2007, Mr. NRSW-2 provided computer generated "screenshots" of archived data in the "NAVOSH Tools" software application that NRSW and NBSD were using to track deficiencies in 2003, 2004, and 2005. These screenshots show that the NAVOSH Tools application includes data fields that permit the user to insert the "original RAC" and the "Current RAC." They also show a field entitled "Reinspection History" that may be used to document additional information.

83. The screenshots for NDN NS 4089, which Mr. NRSW-2 opened in December 2003, show the "original RAC" Mr. OSH-1 used in creating the deficiency was a RAC 3, and the "current RAC" also was a RAC 3. The screenshots show that no additional information was entered to document interim controls or other activities such as reinspection efforts during the life of this deficiency. The screenshots show Mr. OSH-1 closed this NDN when he created NDN NS 7927 in October 2004.

84. Paragraph 1202(b) of OPNAVINST 5100.23F, which was in effect at this time, provides that:

> The activity OSH office shall describe workplace hazards with a RAC of 1, 2, or 3 that cannot be corrected

immediately, in Section A of a NAVOSH Deficiency Notice, OPNAV 5100/12, (see appendix 9-0). The OSH office shall forward a copy of the notice to the official in charge of the operation where the hazard exists. The workplace supervisor shall post a copy of the notice in the area of the hazard until the hazard has been corrected. ***The OSH office shall update the posted notice, as necessary, to accurately reflect the status of the abatement action and required interim controls. (emphasis added)....***

The official in charge of the operation shall take prompt action to correct the hazard and within 30 days of the date of the notice, he/she shall complete Section B of the NAVOSH Deficiency Notice and return a copy to the activity OSH office. Activities shall implement interim protective measures pending permanent abatement and list interim corrections on the notice. The notice shall also indicate the status of the hazard including whether or not the hazard has been corrected and specific abatement action taken. [emphasis added]

85. Paragraph 1203, Interim Controls, states:

Activities may be unable to immediately abate deficiencies under normal working conditions, and some hazards may require temporary deviation from NAVOSH standards. ***Therefore, activities shall establish appropriate interim controls as soon as they identify the deficiency. OSH Offices shall document such controls on the NAVOSH Deficiency Notice per appendix 9-B.*** The OSH office shall review and approve interim protective measures in effect for more than 30 days and revise, as appropriate. [emphasis added]

86. Paragraph 1206, Responsibilities, states:

a. ***Shore activity commanding officers shall***:

(1) ***Identify and correct hazards and maintain a current HA Plan with priorities established for each project listed. If the HA plan is maintained by the regional OSH office, it shall be done in such a manner that specific activity information (or plan) is readily available.*** [emphasis added]

...

(3) ***Review, prioritize and maintain current active projects.*** [emphasis added]

87. The language in paragraph 1202 conflicts with itself and with paragraph 1203, leaving unclear the responsibility for establishing and documenting interim controls. Based on a limited number of interviews, NAVINSGEN finds Mr. OSH-2's belief that the Training Center, as the tenant command, was responsible for documenting the interim controls is consistent with past practice in OSH Offices. NAVINSGEN also finds, however, that the authors of NAVOSH Program Manual intended the OSH office document the interim controls in the NDN and attempted to clarify that requirement when they issued OPNAVINST 5100.23G in December 2005. Everyone agrees the "activity," in this case NBSD, is responsible for correcting the hazard.

88. NAVINSGEN finds the selection of a RAC code is not so precise that reasonable people may not differ. Some have suggested a RAC 3 was sufficient under the circumstances. In this case, the decision turns on whether one thinks a fire "probably" or "possibly" would occur in time. But the experts agree that Mr. OSH-2's stated reason for telling Mr. OSH-1 to change the RAC from 2 to 3 in 2003 was in error. This matter is discussed later in the report.

89. NAVINSGEN also finds Mr. OSH-1's testimony about the reason for lowering the RAC is more credible than Mr. OSH-2's because, at the time Mr. OSH-2 told Mr. OSH-1 to lower the RAC, no interim controls that would reduce the risk had been identified or implemented. Indeed, there is no evidence that shows any interim controls were established and reported to the Safety Office before the Fall of 2004.

90. Based on the evidence presented, NAVINSGEN finds the 2003 NDN was not completed properly. Neither the Training Center nor the OSH office identified any "interim controls" put in place to mitigate the hazard pending abatement.[14] Neither organization obtained and listed a work order number or estimated cost to effect repairs. NAVINSGEN also finds that placing a stack of deficiency notices in rank order by RAC code does not, by itself, constitute hazard management.

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[14] The requirement to update the posted notice is critical, because this is the mechanism to inform employees of the hazard and efforts to address it. Updating information in the NAVOSH Tools application, while useful to the OSH Office, does not satisfy this requirement because that information is not accessible to workplace employees.

2004 Repair Efforts

91. The NRSW investigator found no record indicating what may have happened between December 2003 and March 2004. Mr. PWO-9 provided a cost estimate for the base-wide alarm system upgrade project containing a one page estimate for work in Building 3232 dated 3 March 2004. The estimated cost to replace the Building 3232 fire alarm system was $22,287.90.

92. Mr. PWO-9 found records showing that while performing preventive maintenance on 27 July 2004, Mr. PWC-3, the PWC Recurring Shop Fire Alarm Technician doing the work, noted that the 2nd Floor horns were not working.

93. The NRSW investigator obtained FFD records that show Mr. FFD-6 of the FFD prepared a Fire Drill Report on 23 August 2004 that states:

> 1. Fire alarm horns did not sound on second floor and south end 1st floor. System needs upgrading. 2. Submit work request to PWC.

94. The report also said: "Regional Safety has information. Max occupant load 140."

95. According to Chief FFD-1, the second numbered item in the report was intended to direct the Training Center to submit a work request to PWC in order to repair the fire alarm system. Chief FFD-1 then took other steps to get PWC to repair the fire alarm system.

96. On 24 August 2004, Chief FFD-1 sent an email to Mr. PWC-2, the PWC Recurring Shop Supervisor and Mr. PWC-3' boss.[15] The email states:

> On 23 Aug 04 at 1000, FFD-6 conducted a fire drill at Bldg 3232, Naval Station. The fire alarm system (evacuation horns) did not work on the second deck and the south end of the first floor. The system requires maintenance. I was informed at one time that a private contractor had a

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[15] As is the case with NAVOSH deficiency notices, FFD inspectors give inspection and drill reports to a facility occupant. There is no formal requirement to provide copies to the OSH office, which may be tracking the same deficiencies. Nor is there a requirement to give a copy to the PWO, PWC, or other representative of the "landlord" who is responsible for repairing deficiencies. However, as the evidence in this case demonstrates, FFD personnel may use an informal networking system to address deficiencies.

> contract to re-do the fire alarm system. He went belly-up and the job was never completed. Mr. TC-5 at 767-6514 stated that this was 18 months ago. Something needs to be done - this building occupies 140 individuals. This building is occupied by dental/educational personnel. Thank you very much for your assistance in this request.

97. Chief FFD-1 copied Mr. PWO-6, a PWO employee who works one level below Mr. PWO-9 as the PWO Maintenance Control Director, on the email in order to ensure PWO knew the alarm system needed repair.[16]

98. On 31 August 2004, Mr. PWC-3 opened a Discrepancy Report, job order number FKSJK, in MAXIMO, and gave a copy to Mr. PWC-2. It states:

> Horns on 2nd floor disabled due to contractor damage fire alarm system is antique needs replac EST COST TO REPLACE FIRE ALAR SYSTEM $40,000

99. Mr. PWO-9 says Mr. PWC-2 should have opened a RM corrective chit to make repairs on the basis of Mr. PWC-3' Discrepancy Report or Chief FFD-1's email, but he can find no record that Mr. PWC-2 took any action in response to them.

100. Mr. PWO-6, the current PWO Maintenance Control Director, reviewed information concerning job order number FKSJK in MAXIMO for the investigators in May 2007. He said the work order was not completed or closed by the end of the fiscal year (FY), so MAXIMO rolled it over into FY 2005 and, the following year, into FY 2006. It was closed out on 27 October 2006 by Mr. PWC-5 when Mr. PWO-6 created a new work order to address the October and November 2006 work effort that finally restored the alarms to proper operating condition.

101. Mr. PWO-6 said there is no procedure to catch open job orders that MAXIMO rolls to the next year. One would have to search for the work order manually because there is no auto prompt in the system that catches a roll over. So, unless someone is aware of the problem, they will not notice it.

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[16] Mr. PWO-9 found no record of the project described in the email, or of a contractor defaulting on work after going "belly-up." He notes Mr. PWO-6 would expect PWC to address this request under the RM Program; PWO would not need to act unless Mr. PWC-2 told PWO the repair cost would exceed $1,000 ($45,000 in 1994) or the recurring account fund needed replenishment.

102. Mr. PWO-6 also explained that:

> The tech should have stayed abreast of his work. We had no way of knowing this was in the system unless we went out and looked for it manually. The techs have to take responsibility to follow-up on their work; particularly if it is important. If he wrote it, he should have fixed it; otherwise, we have no way of knowing it's out there.
>
> You can perform a search in MAXIMO by status and view all the open work orders if you want. At times, I do that. If I prompt the system, I don't know if I'll get old job orders or not. It's not something we normally do, however. I have done it before and found 100 orders or so,...

103. When asked about the discrepancy report in June 2007, Mr. PWC-3 said he had no idea where the $40,000 estimate came from, and did not recall making that entry himself. He said he took no action on the matter because no one ever authorized him to undertake the work by issuing him a work order. He said he would not do repair work on his own initiative; someone else must first authorize him to spend the money required to make repairs.

104. After learning of Mr. PWC-2' involvement in efforts to repair the alarm system in 2004, the NRSW investigator sent email questions to Mr. PWC-2 in April 2007 and NAVINSGEN interviewed Mr. PWC-2 by telephone in May 2007.

105. Mr. PWC-2 said he was the Supervisor of the Fire Alarm Tech Shop at PWC between January 2002 and October 2004. Mr. PWC-2 explained that if a mechanic discovered problems with the alarm system during routine maintenance that were beyond the available recurring funding, the mechanic could report it to him because he could approve a repair ticket in MAXIMO. Mr. PWC-2 also said the fire protection engineer and facility manager would get involved if a repair was "beyond the scope of the mechanic."

106. Mr. PWC-2 does not remember anyone speaking with him about the alarms in Building 3232 and does not recall receiving a job order to inspect/repair the alarms in that building. He does recall discussing "fire alarm issues" with the Deputy Public Works Officer, Mr. PWO-9, but does not remember a reference to Building 3232 during those conversations. He recalled discussions with the "Zone Production Officer in terms of the "fire alarm loops" [the overall base system] being outdated and in need of constant repair. Those discussions included plans to update the base with a better alarm system.

107. Mr. TC-5 recalled that during 2004, he attempted to get the Dental Clinic, the Command for which the 2002 renovations had been performed, or the ROICC, the office that was responsible for oversight of the renovation contract, to take responsibility for the repairs. He was not successful.

108. Based on the evidence presented, NAVINSGEN finds Mr. PWC-2 should have created a corrective or RM work order in response to Chief FFD-1's 24 August 2004 email, or Mr. PWC-3' 31 August 2004 discrepancy report, but failed to do so. There is no formal system that provides a mechanism for a FFD to notify the PWC, PWO, or NBSD of a discrepancy found during a fire inspection. Consequently, Chief FFD-1 was relegated to using emails to notify others of the deficiencies and seek their correction.

October 2004 - Second OSH Deficiency Notice

109. Mr. OSH-1 said he monitored the status of Building 3232 alarms during 2004. He recalled seeing warning signs during one of his visits to the building. He said no work order was identified or provided to him indicating the alarm system had been repaired, so on 25 October 2004, he inspected the building again. He found some horns and strobes remained inoperable and wrote a second NDN, number NS 7927, dated 25 October 2004.

110. Mr. OSH-1 used the same language to describe the violation as in the 2003 notice. However, he also noted that this was a "Repeat Deficiency: power to fire annunciator system to the south end of Building 3232 was cut by contractors in 2002. Work orders have been filed."[17] This time, Mr. OSH-1 assigned a RAC of 2, based on a hazard severity of II and a mishap probability of B, because he wanted to focus more attention on the problem, which had been unresolved for almost a year. The notice says 150 employees were exposed to the hazard.

111. The interim control section of the 2004 NDN states:

> Develop SOP (standard operating procedures) outlining procedures to be taken in case of emergency leading to mandatory evacuation of all personnel. SOP shall be reviewed, and approved, by the CNRSW site safety office."

112. The abatement action taken section states:

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[17] We understand this to mean a work order was filed concurrent with his second inspection. However, no one was able to produce a work order dated in 2003 or 2004 during the course of the investigation.

Contacted PWO. Federal fire department has been notified. Work orders have been submitted to include complete replacement of outdated and/or obsolete fire annunciator system.

113. The comments and recommendations section states:

Supervisor TC-5 has been notified. All personnel have been briefed on actions to be taken during an emergency. Work order has been filed with PWC. Fire Department also has this as a repeat deficiency. Work order number is unavailable as of the date/time of this writing.

114. Mr. OSH-1 then closed out the December 2003 NDN, adding an annotation to show that it was "rewritten as NS7927. Action Completed." The CNIC investigator obtained a copy of this NDN that contains this notation. It does not have any information on the interim controls, identify a work order number, or provide an estimate of the cost to repair the alarms.

115. Mr. PWO-9 reviewed the PWO management database, MAXIMO, for this timeframe but found no work orders had been created for this NDN. His review also included a search for any work orders that would have been filed with either the PWO or the PWC.

116. Mr. OSH-1 said he delivered the 25 October 2004 NDN to the Training Center, noting that it mirrored the 16 December 2003 NDN he had also issued. He said Mr. TC-5 told him the Training Center had no funds available to correct the problem and, since the system was outdated, it would cost more to repair it than to get the new system that, according to Mr. TC-5, was "expected to be installed" in the future.

117. Mr. OSH-2 is familiar with the October 2004 NDN, but does not recall whether he noticed that Mr. OSH-1 had changed the RAC from 3 to 2, or why he did not object to the change. Under the OPNAV instruction, raising the RAC to 2 should have the effect of raising the priority for correcting the deficiency.

118. Since Mr. OSH-2 did not object to a RAC 2 in 2004, NAVINSGEN concludes it was the appropriate level to assign in both 2003 and 2004. One practical consequence of changing the RAC code would be to raise the priority for funding the repair. In this case, for the reasons discussed below, the assigned RAC did not matter, because it had no impact on the priority assigned to make repairs and was lowered at a later date.

119. The NAVOSH Tools screenshots Mr. NRSW-2 provided for NS 7927 show Mr. OSH-1 used the "Reinspection History" field to enter the following statement for 25 October 2004:

> Received a call from LT PWO-10 indicating that the work order number still has not been located.

November 2004 - Complainant Learns of Inaudible Alarms

120. Complainant started working at the Training Center as a GS-11 NAVOSH Safety Specialist-Instructor in September 2004. She was promoted to a GS-12 in late 2005, but left in February 2006 to take her current GS-11 position at NADEP North Island, where she is an OSH Specialist. She said the command's inaction over her complaints about the defective alarm system was part of the reason she left the Training Center; she felt her complaints were being "blown off" due to the command's lack of respect for her as a safety professional and as a woman.[18]

121. Complainant told the CNIC investigator she became aware of the defective fire alarm system when it was brought to her attention sometime in October or November 2004. She believed it was, in her words, "kind of a joke" between staff members that a Safety Training Center would have such a problem.

122. Complainant said the only corrective action the command took was to post signage explaining what to do in case of a fire and to inform the instructors that, in the event of a fire, they should announce to their students that the building must be evacuated. Complainant considered these measures inadequate.[19]

123. Although Complainant says her responsibility to address the problem with the alarms ended when she notified Mr. TC-5 and the Training Center CO, the facts presented below demonstrate the Training Center reasonably expected Complainant, an OSH specialist, to do more.

November and December 2004 Email Exchanges

124. Mr. TC-5 told NAVINSGEN that when he received the 25 October NDN from Mr. OSH-1, he gave it to Complainant to work

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[18] Complainant mentioned that she had already filed other complaints (for EEO violations and hostile work environment) regarding command leadership. Those complaints were investigated separately.

[19] As discussed below, Complainant revised the SOP at Mr. TC-5's request, and he thinks she improved it. When asked by NAVINSGEN in 2007, Complainant could offer no specific suggestions for further improving the SOP.

because he and Mr. TC-4 did not know what to do with it. Mr. TC-5 thought that Complainant, the Training Center's OSH Specialist, would know how to handle it. Mr. TC-5 said Complainant improved the SOP by revising it and posting copies in the Training Center classrooms. Mr. TC-5 also said he asked Complainant to become involved in NBSD safety meetings.

125. On 3 November 2004, Complainant sent Mr. OSH-1 an email, subject line "meetings," that stated: "I haven't heard from Mr. OSH-2 about when the meetings are - any idea?"

126. In the early morning of 4 November 2004, Mr. OSH-1 sent an email to Mr. OSH-2 and Complainant regarding her "meetings" email that said:

> Mr. OSH-2, [Complainant] would like to get in on the weekly meetings. Could you find out exactly which meetings she would like to attend and help her out with this if you can? I believe this would be TC-5's idea.

127. Later that morning, Complainant sent an email to Mr. OSH-1 stating:

> I would like to attend your Command Safety Meetings which include your upper echelon so we can push this Fire Alarm situation to be corrected ASAP (per TC-5, NAVOSH Director and our NAVOSH Commanding Officer, CDR TC-1).

128. Mr. OSH-1's reply to Complainant that day said:

> I still require a work order number for the fire annunciation system in your part of BLDG 3232. If this cannot be located, a new work order must be submitted. Please advise.

129. The NAVOSH Tools screenshots reflect that Mr. OSH-1 entered the following entry under the date of 4 November 2004:

> Sent an email to [Complainant] requesting work order number. No response received.

130. On 8 November 2004, Mr. OSH-1 sent Mr. TC-5 an email with a copy to his supervisor, Mr. OSH-2. The email, subject line "Fire Annunciator - Work Order Request," states:

> Mr. TC-5, A reminder. Without a work order for the fire annunciator, we will be unable to follow up on the status

of the NDN (NAVOSH Deficiency Notice) submitted on 10/25/2004 as Control Number NS7927.

131. Later that day, Mr. OSH-2 followed up with his own email to Mr. TC-5, using the same subject line. He said:

> TC-5, How are you? ... Just to let you know, as soon as you can get us that work order number we can light a fire at PWC to get that corrected. Let me know if you run into any resistance. Look forward to catching up sometime,....

132. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 12 November 2004:

> Reinspection shows that no work order has been submitted.

133. There is no record indicating Mr. TC-5 replied to Mr. OSH-1's email. However, on 15 November 2004, Complainant replied to Mr. OSH-1's 4 November email to her, stating:

> I checked with the office downstairs (where you and I went). They cannot find any trouble ticket on that. She said that it was written up on the fire dept. inspection. So, do I submit a trouble ticket now?

134. Mr. OSH-1 replied the same day, stating:

> Yes, I believe that someone should submit a work request to have the fire annunciator system repaired. I will update the Deficiency Notice as appropriate.

135. Complainant replied that day, stating: "Mr. TC-5 will be contacting you about this issue."

136. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 15 November 2004:

> Received an email from [Complaint], asking if she should submit a work order. Email is available.

137. On 17 November 2004, Mr. TC-5 replied to Mr. OSH-2's 8 November email. He said:

> HI Mr. OSH-2, hope you are doing well:
>
> Here is my Commanding Officer's read on the situation.

a. According to the ISSA[20] we have with CNRSW, we are supposed to be supplied with a fully functional building, including emergency devices, heating/cooling and lighting. NAVOSHENVTRACEN will only fund (obtain a work order), for any Command specific modifications that we need in order to execute our mission and which are approved of, by the Public Works Officer.

b. This situation regarding the annunciator most likely also applies to tenants HSA, the NAVMEDCEN Balboa IHs and the Reserve Mobilization Center on the first deck of our wing. So you can see my CO's perspective. Why should he pay for something the region should supply and barring that argument why are we being asked to pay all costs when there are other Tenants involved. Needless to say for CDR TC-1 that idea did not pass "the global test."

c. Back to the cut wire.... MR. TC-4 and I notified the ROICC of the damage to the annunciator immediately. It fired off when the Asbestos Removal Contractor was working in the Health Support Activity (HSA) spaces cut the wires down on the First deck. That was 2 years ago....

Please let us know when you have your next NAVSTA Safety Round Table as I would like [Complainant] to attend on a regular basis. Now that I have a 018[21] on board we need to start being a local asset despite the fact that my customer base ranges from Texas to Singapore. Best regards

138. The following day, 18 November 2004, Mr. OSH-2 replied to Mr. TC-5's email, stating:

> Mr. TC-5, Mr. OSH-1 will be visiting you this morning, could you show him where that wire that was cut is located? Appreciate it, I think this is going to be my pet project. Talk to you soon.[22]

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[20] As mentioned earlier, there is no effective ISSA between the Training Center and NBSD or NRSW; Mr. TC-5 was referring to the draft ISSA the Training Center had signed and returned to NBSD in 2000, which he considered controlling.

[21] Mr. TC-5 was referring to the OSH Specialist Job Series number.

[22] We could find no further email communications between Mr. OSH-2 and Mr. TC-5 on this matter until 17 May 2006, when Mr. OSH-2 sent Mr. TC-5 an email, with the same subject line as the previous emails, which said "Mr. TC-5, Is this still broke?" Mr. TC-5 replied that day: "We actually saw someone from NAVFAC (PWC) last week - spooky. This has got to be the biggest joke over there." Mr. TC-5 may have been referring to the study Mr. FACSW-1 was performing at this time, discussed below.

139. Mr. TC-5 said that after receiving this email from Mr. OSH-2, he expected NBSD to take the required action to repair the alarms since this was now a Safety Office "pet project."

140. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 18 November 2004:

> Contacted LTJG PWO-8, PWO. He confirmed that work orders had been submitted and are awaiting contractual approval for complete replacement of outdated/obsolete fire annunciator system.

141. LT PWO-8 was the TL Officer for Building 3232 at this time. NAVINSGEN sent the screenshot to him and asked whether he was referring to the base-wide upgrade or a contract to replace the alarms in Building 3232 only. He replied:

> To the best of my knowledge, I do believe the statement referred to the base-wide system upgrade. From my memory, I do believe that a lot of this work was never executed because we were expecting the base wide loop project to be awarded and remedy all of the problems in this facility. I did submit trouble calls for repair while I was at the PWO.

142. NAVINSGEN also sent Mr. OSH-1 the screenshot and asked whether he recalled what the 18 November 2004 meant. Initially, he said it referred to breaking out the Building 3232 portion of the upgrade from the larger contract and awarding a separate contract for that building, but after learning of LT PWO-8's response, he said he would defer to LT PWO-8's recollection of the matter.

143. On 22 November 2004, Mr. OSH-1 sent Mr. TC-5 an email that said:

> I have been instructed by Mr. OSH-3 (and Mr. OSH-2 agrees) to come over to see you and either retrieve a copy of a detailed SOP outlining the requirements for an emergency communications plan in case of emergency leading to mandatory evacuation of your building. If this is not available, I have also been instructed by both the above named personnel to require you to create one that will be reviewed and signed by the CNRSW/NAVSTA Site Safety Office.
>
> Please let me know if it would be prudent for me to come to your office if there is an SOP available, or a status on writing a new one.

I have contacted the PWO office, LT PWO-8, to ensure that this case takes top priority. With a multi-million dollar package including your fire annunciator system, this would be difficult to remove from the package and place it as number one (top) priority. However the call is yours.

Please advise.

144. Later that day, Mr. TC-5 replied:

Today is best.... The only thing we have that is modified for the current situation is the fire bills that are posted in the classrooms.

145. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 23 November 2004:

Arrived at bldg 3232 and spoke with Mr. TC-5. Fire bill is in place outlining procedures to be taken in case of emergency. Copy of fire bill is available.

146. Mr. OSH-2 said he sent emails and made phone calls in an attempt to get someone to look at the fire alarms. Mr. OSH-2 has no documentation of these efforts because he lost a lot of emails at one time when he had "computer issues." Mr. OSH-2 recalled that some people he contacted, including CDR PWO-4, the Public Works Officer, told him the Building 3232 alarms were part of a base-wide upgrade project that had been submitted for approval. Mr. OSH-2 said he asked on several occasions whether work on Building 3232 could be done at the beginning of the upgrade effort. He also said Mr. OSH-1 sent emails trying to get the alarms repaired, without success. Mr. OSH-2 did not know what may have happened to those emails.

147. When asked for further clarification in May 2007, Mr. OSH-2 said the Safety Office cannot initiate or track repair work orders. Because he thought the base was responsible to pay for the repairs and wanted to help Mr. TC-5 resolve the problem, he made several phone calls to CDR PWO-4 to discuss Mr. OSH-1's deficiency notices. Mr. OSH-2 said CDR PWO-4 told him the deficiency notices would be taken care of as part of the alarm system upgrade project. Mr. OSH-2 believed CDR PWO-4 was giving him the PWO position on this matter. He understood it was common knowledge the alarms would be repaired as part of the base-wide upgrade project. Given CDR PWO-4's position, he decided to no longer press the issue of repairing the alarms apart from the upgrade.

148. Mr. OSH-1 said he sent "30-day" notices to the Training Center about his 25 October 2004 NDN. He was able to find and provide a copy of one 30-day notice, which he sent to Complainant on 6 December 2004. That notice states in part:

> As per CNRSW instructions, I am to inform you and/or TC-5 of the fact that we have not received a response to the deficiencies noted during the recent annual safety inspection of your command/department. I have received the copy of your FIRE BILL and have filed it accordingly. The other two deficiencies are still in question. Please forward any information you may have regarding steps taken to abate the deficiencies/hazards which remain open. If these deficiencies have been abated, please return the NAVOSH DEFICIENCY NOTICE (NDN) to me with a written statement stating what, if any, steps have been taken to remedy the situation.

149. The following morning, 7 December 2004, Complainant sent Mr. OSH-1 an email stating: "Could you resend that info to me about our deficiencies, please."

150. Mr. OSH-1 replied a few hours later, stating: "The hard copies were delivered to the military person at the desk in TC-5's office on 19 November 2004."

151. Complainant thinks she verbally notified CAPT TC-1, then-Commanding Officer of NAVOSH Environmental Training Center, of the defect around December 2004, but never put it in writing. She felt she didn't have to put it in writing because CAPT TC-1, Mr. TC-5, and Mr. TC-4 all knew about the problem.

152. Mr. OSH-2 provided a copy of the SOP the Training Center posted that was in the OSH Office files. It states:

> FIRE EVACUATION NOTIFICATION IN THIS BUILDING WILL BE DONE BY "WORD OF MOUTH" NOT BY AN ALARM SYSTEM.... IF SOMEONE SHOULD SHOUT, "FIRE" ENSURE ALL AREAS HEAR THIS NOTIFICATION AND EVACUATE THE BUILDING. INSTRUCTORS WILL CHECK ALL CLASSROOMS, LABORATORY AREAS AND RESTROOMS.

153. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 13 January 2005:

> Interim early warning system is in place. RAC has been reduced to RAC-3.

154. The archived NAVOSH Tools screenshot Mr. NRSW-2 provided shows the application has two fields to record the RAC; one labeled "Orig RAC" and the other labeled "Current RAC." The archive copy reflects the Orig RAC is "2" and the Current RAC is "3." However, the screenshot of the archived report that is printed from the application only reflects that the RAC is a 3, without indicating whether that is the "original" or "current" RAC. Of interest, the original NDN Mr. OSH-1 issued on 25 October 2004 and gave to the Training Center bears the printed notation, above the RAC Code block, "Original RAC: 2 (Prior to interim controls)." The 16 December 2003 NDN does not contain a notation indicating the RAC is subject to change after interim controls are put in place.

155. The language of the SOP does not appear in the archived NAVOSH Tools screenshots for the 2004 deficiency notice, which still contain the language Mr. OSH-1 entered when he created the deficiency, quoted in paragraphs 110-115 above.

156. NAVINSGEN showed the NAVOSH Tools screenshots to Mr. OSH-1 and asked him about the practice of lowering the RAC after interim controls are established. He confirmed this was the practice in NRSW. He said he had gone to the Training Center around the time he made the entry and observed Mr. TC-5 and other instructors talking about the problem with the alarms and the SOP at the start of classes. He thought this reduced the risk and justified changing the RAC. However, there is no evidence the deficiency notice posted on the Training Center walls was ever updated to reflect this action.

157. According to Mr. TC-5, funding for repair and/or construction projects has been limited for several years and from 2004 forward the Training Center and the NBSD Public works Department hoped that funds for the Training Center fire alarm system repair work would be included as part of a base-wide fire alarm system upgrade, a proposed major project costing approximately $4 million. However, funding for this major project had been postponed from year to year and had not become available before the alarms were repaired in late 2006.

158. Mr. TC-5 said he assigned Complainant to attend the NBSD "safety board"/department head meeting to monitor future actions and to provide Training Center support to others. He does not think she attended many meetings. Mr. OSH-2 said these were NBSD's regular staff meetings, not specifically safety meetings, and explained that to Complainant when she asked about them. Mr. OSH-2 invited Complainant to attend the NBSD staff meetings,

which he chairs, but he does not recall her attending any of them.

159. When asked in May 2007, Complainant said she did not attend those meetings because she was never invited to them. She also said she did not see the 30 day NDN deficiency notice and Mr. TC-5 did not assign her to work it. She explained she knows the procedures necessary for following up on deficiency notices, but remarked that it appeared neither Mr. TC-5 nor CAPT TC-1 were familiar with them.

160. Based on the evidence presented, NAVINSGEN finds the Training Center properly assigned Complainant, an OSH Specialist, responsibility for working this issue. Like other OSH Specialists, including Mr. OSH-1, Mr. OSH-2, and Mr. NRSW-2, she thought the tenant was responsible to establish interim controls, obtain a work order and complete the sections of the deficiency notice pertaining to those items. She did not do this. NAVINSGEN does find, however, that someone, probably Complainant provided Mr. OSH-1 or Mr. OSH-2 a copy of the SOP as modified and posted by Complainant. One of them attached it to the OSH Office copy of the NDN. NAVINSEN finds this constitutes substantial compliance with the requirement to document the interim controls on the NDN that must be posted near the hazard. However, as discussed later, NAVINSGEN finds the SOP was not documented within NAVOSH Tools, not reviewed by the AHJ, Mr. FACSW-1, and inadequate in substance.

161. NAVINSGEN finds that even though NBSD asserts the Training Center was responsible for obtaining a work order number and updating the deficiency notice, Mr. OSH-1's 15 November 2004 email states he will "update the Deficiency Notice." Further, in his email to Mr. TC-5 of 8 November 2004, Mr. OSH-2, the NBSD Site Safety Officer, says he will "light a fire at PWC," not PWO, in order to get the alarms repaired. One purpose of OPNAVINST 5100.23F/G is to ensure the process by which tenants and safety officials get landlords to effect safety related repairs is transparent. At NRSW and NBSD, it is not. In this regard, it is significant that Training Center personnel did not have access to the NAVOSH Tools application, so they could not see the information Mr. OSH-1 was recording in it.[23]

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[23] The contractor who supports ESAMS, the new application CNIC has adopted for use in all regions, says it has the capability to give tenant command personnel access to deficiencies that apply to them.

162. NAVINSGEN finds that the hazard abatement plan NBSD adopted for the Building 3232 alarm deficiencies was to replace the alarm system during the base-wide upgrade once that project was funded. This finding is based on Mr. OSH-1's notations in NAVOSH Tools, LT PWO-8's recollection after reviewing those notations, and Mr. OSH-2's testimony of his conversations with CDR PWO-4, the Public Works Officer. Although CDR PWO-4 does not recall any conversations to this effect, her testimony, recounted later in this report, does not contradict Mr. OSH-2's recollection. Because she was optimistic that funding for the base-wide upgrade would soon become available, she thinks it reasonable that she and LT PWO-8 may have told others the alarm deficiencies would be addressed during the base-wide upgrade.

163. Based on the evidence presented, NAVINSGEN finds the PWO selected the base-wide upgrade as the hazard abatement plan. The OSH Office should have, but did not, document this plan to abate the hazard in the NAVOSH Tools field provided for entering such information and on the NDN posted in the Training Center. Mr. OSH-1's note of his conversation with LT PWO-8, while perhaps sufficient for internal OSH office tracking, did not satisfy the critical requirement of informing people working in the Training Center. The OSH Office also should have informed the Training Center of the NBSD decision and updated the notice. Mr. OSH-1's 22 November 2004 email to Mr. TC-5 appears to notify Mr. TC-5 of this decision, but Training Center action in 2005 suggests Mr. TC-5 did not understand that, insofar as the PWO was concerned, the alarms would not be repaired apart from the base-wide upgrade. There is no evidence indicating anyone informed Complainant of the PWO decision, or that anyone updated the notice posted in the Training Center.

164. In November 2005, the decision to defer replacement until the base-wide upgrade was not inherently unreasonable, especially since CDR PWO-4 had reason to believe funds would be approved shortly after the start of the new Fiscal Year in October 2005. But that decision should have been made by the NBSD CO, not the PWO, because under the NAVOSH Program Manual the NBSD CO is responsible for repairing the alarms and accountable for any mishaps resulting from the deficiencies in their operation. The OSH Office or the PWO should have informed the NBSD Commanding Officer of the deficiency, and that replacement (not repair) cost estimates varied between $22,000 and $40,000, so the CO could make an informed risk management decision about a matter for which he was responsible. Neither Mr. OSH-2 nor CDR PWO-4 did this.

May to June 2005 Repair Efforts

165. Complainant said she believed CAPT TC-1 expected her to find a solution to fix the alarm system, but takes the position that her responsibility was to identify and report the deficiency, not to fix it herself. She said she raised the issue of the defective alarm system regularly at the weekly video teleconference meetings between the West Coast Training Center staff and the Norfolk, VA headquarters staff and believed her concerns would be reflected in the minutes of the meetings.

166. A review of the minutes of these meetings from December 2004 forward showed no reference to the defective fire alarm system until 9 May 2005, when the new XO, LCDR TC-3,[24] reported that he had called the Training Center the previous week about "the inoperative fire alarm system in building 3232" and learned that Complainant was "the West Coast POC on this issue." He reported that she would provide an email update on this topic.

167. A series of May 2005 email exchanges between Complainant, CDR TC-3, and Chief FFD-1 demonstrate Complainant was tasked to be the Training Center POC for this matter and had worked "this long-standing issue" for some time without success.

168. For example, Complainant's 3 May 2005 email to CDR TC-3 passed on contact information for the FFD, described the language in the 2004 deficiency notice, and informed CDR TC-3 that Complainant had made and posted signs stating:

> FIRE EVACUATION NOTIFICATION IN THIS BUILDING WILL BE DONE BY "WORD OF MOUTH" NOT BY AN ALARM SYSTEM ....IF SOMEONE SHOULD SHOUT, "FIRE" ENSURE ALL AREAS HEAR THIS NOTIFICATION AND EVACUATE THE BUILDING. INSTRUCTORS WILL CHECK ALL CLASSROOMS, LABORATORY AREAS AND RESTROOMS.

169. CDR TC-3' 4 May 2005 email to Chief FFD-1 and Complainant states:

> Thanks for helping us out with this long-standing fire alarm issue. My POC is [Complainant] at our NAVOSHETC West Coast Det. She has previously tried to resolve this, unsuccessfully; maybe she hasn't been steered to the right person to help. I would assume Public Works should be able

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[24] LCDR TC-3 reported onboard in mid-April 2005. He has been promoted to CDR, so we will refer to him by his present rank.

to get this fixed on a high priority since it is a RAC of II.

170. On 4 May 2005, Chief FFD-1 prepared a memo for the record to note he had called CDR TC-3 to let him know that the building "his Det is in has a major fire alarm discrepancy."

171. Later that day, Chief FFD-1 prepared a memo for the record to note he had called Mr. PWC-3, the PWC fire alarm technician who wrote the 31 August 2004 discrepancy report, to let him know that the "BLDG. 3232, Naval Station Horn Circuit on the second floor is cut. The rest of the building does work."

172. On 6 May 2005, LT PWO-8, the PWO TL Officer assigned to handle Building 3232 issues, sent an email to Chief FFD-1, with copy to Mr. PWC-1, the new PWC Recurring Shop foreman who had replaced Mr. PWC-2 in October 2004. He said:

> Chief FFD-1, I spoke to the PWC Fire Techs and they informed me that they will investigate fixing the problem early next week. I know this is a big issue and you are receiving pressure from the top so I will stay on top of this and get you info as I receive it.

173. On 9 May 2005, Chief FFD-1 replied to CDR TC-3 4 May 2005 email, copying Complainant and Mr. PWC-1. He said:

> LCDR TC-3, I spoke with PWC last week and was informed that the Building 3232, Naval Station fire alarm system (evacuation horns) does work with the exception of the 2nd floor that is cut. PWC assured me that they will investigate this morning (09 May 05). The TL for this building is LT. PWO-8. I will keep you posted of PWC's findings. V/r, Chief FFD-1.

174. This email included the chain of emails listed above, beginning with the email from Complainant to CDR TC-3 on 3 May 2005, which contained a copy of the NDN.

175. Chief FFD-1's email 23 May 2005 to CDR TC-3 reported:

> I spoke with PWC (Fire Alarm Tech Mr. PWC-3) last week Friday concerning the fire alarm system. I was informed that PWC will be working on the fire alarm system this week. They will run wires from the manual fire alarm pull station on the first deck and re-connect to the pull station of the second deck. Hopefully, that will solve the

problem. If not, PWC will run new conduit from the first deck to the second deck. I'll keep you posted.

176. That day, CDR TC-3 sent emails to CAPT TC-1, Mr. TC-5, Mr. TC-4, and Complainant informing them of Chief FFD-1's message. Complainant responded by saying "WoW! That is great! Thank you!"

177. Mr. OSH-1, however, still appears to have been waiting to hear that a replacement contract had been awarded. The NAVOSH Tools screenshots reflect that Mr. OSH-1 made the following entry under the date of 16 May 2005:

STILL AWAITING CONTRACT

178. The weekly video teleconference meeting minutes for 31 May 2005 indicate CDR TC-3 would follow-up on getting PWC San Diego to complete fire alarm repairs in the Training Center. The meeting minutes for 11 July 2005 indicate CDR TC-3 had sent an email to the Base Fire Chief; that Training Center personnel would brief the "new CEC officer who is our building liaison officer;"[25] but that Mr. TC-5 reported no work had yet been performed on the fire alarm system.

179. Complainant reports she contacted the NBSD Federal Fire Department in the summer of 2005 to see if someone could provide a cost estimate for repairs and received an estimate of $20,000. However, Complainant was unable to provide the investigator or NAVINSGEN a copy of the estimate, recall who gave her the estimate, or identify someone she may have given it to after receiving it. No other Training Center personnel interviewed could recall ever seeing, or being told of, this estimate.

180. NAVINSGEN sent Complainant a copy of the 3 March 2004 estimate and asked if she had seen it. She said she had not.

181. Mr. PWO-9 found no record of any work being performed on the alarms in April, May or June 2005 except for regularly scheduled preventive maintenance (PM). The PM did include inspecting the horns and strobes. Mr. PWO-9 was unable to find any records for this time frame indicating PWC or PWO prepared a corrective work order to repair the alarms, either.

182. Based on the evidence presented, NAVINSGEN finds Complainant notified CDR TC-3 of the problem with the alarms

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[25] A reference to ENS PWO-2, who replaced LT PWO-8 in June 2005.

shortly after he reported to the Training Center. NAVINSGEN finds that he took the matter for action and pushed it with the FFD. NAVINSGEN finds that Chief FFD-1, again, took it upon himself to get PWC to repair the alarms and, for the first time, there is written evidence to indicate that the PWO TL Officer was trying to address the problem by way of repair, rather than waiting for the award of a replacement contract. Nonetheless, NAVINSGEN finds that neither the PWC nor the PWO created a corrective or RM work order to effect repairs at this time. Meanwhile, Mr. PWC-3 was still waiting for someone to issue a work order in response to his 31 August 2004 deficiency report, which had rolled over to 2005 without action.

July 2005 Repairs

183. Mr. TC-5 said that in July 2005, while awaiting NBSD action, the Training Center independently installed 17 battery-operated smoke alarms in its area of Building 3232 as an additional interim control measure. He provided a building diagram showing the location of the smoke detectors.[26]

184. On 11 July 2005, CDR TC-3 sent an email (with accompanying email string going back to May) to Chief FFD-1 stating: "Mr. FFD-1, Just a follow-up on our fire alarm issue. Have you been given an update recently on the status of the repair? Thanks for your support and help in this matter."

185. On 12 July 2005, Chief FFD-1 forwarded CDR TC-3' email to ENS PWO-2, who had relieved LTJG PWO-8 as the Building 3232 TL Officer in June, with copies to Mr. PWO-6, Mr. PWO-7, the NBSD Facilities Manager, and LCDR TC-3, stating:

> ENS, Please refer to email traffic concerning fire alarm system at Bldg 3232, Naval Station. I've been talking to PWC fire alarm techs and they keep telling me about funding. This system has been OUT OF SERVICE for two years. This needs to be repaired (ASAP) so all the fire alarm pull stations and audible work for the entire building. SOMEONE NEEDS TO SUBMIT AN EMERGENCY CHIT TO REPAIR THIS SYSTEM. This issue was forwarded to PWC since May 2005. We went over two months and all I received from PWC was lip service. Are we going to react when someone gets hurt or killed from an emergency the building, then

[26] The smoke detectors would be an interim control. The PWO says it did not know they were installed, and there is no record the Training Center told the PWO, the PWC, the FFD or the OSH Office about them.

> its too late. I'm not one to take a gamble with life safety issues.

186. On 13 July 2005, Mr. PWO-6 forwarded Chief FFD-1's email to ENS PWO-2, copy to Mr. FFD-1, with the following note:

> "I spoke with Mr. PWC-1, recurring [shop] foreman; he thought that the fire techs had already taken care of this problem. He assured me that they would start working on this A.S.A.P.

187. On 19 July 2005, Mr. PWC-1, who became a Maintenance Supervisor in the PWC Recurring Shop in October 2004, created work order number M6WMC. The notation "(R) Corrective Maint" in the upper left hand corner of the printed work order means it is a recurring maintenance item that resulted from something that was discovered during routinely scheduled quarterly PWC preventative maintenance. This is the first corrective maintenance, rather than routine recurring maintenance, work order anyone was able to identify. Mr. PWO-6 said the information he saw in MAXIMO (in June 2007) indicates Mr. PWC-4, a PWC technician, probably went out to perform routine PM and found a PM-related discrepancy that caused him to create a discrepancy chit that led Mr. PWC-1 to create this work order. In other words, Mr. PWO-6 could not state the work order was created at the request of anyone in the PWO, although the fact that Mr. PWC-1 created it six days after his conversation with Mr. PWO-6 cannot be discounted.

188. Based on what he saw in MAXIMO, Mr. PWO-6 reported that the 19 July 2005 work order was assigned a priority 2 rating, just one level above "routine." The tech started out by performing PM and recorded his work on a recurring work order. The "recurring discrepancy" notation in MAXIMO indicates to Mr. PWO-6 that the discrepancy was found during regular PM or scheduled maintenance:

> We pay for this type of recurring maintenance out of yearly money marked for this type of work. If, like in this case, they find a related problem, then they open a "Recurring Corrective Maintenance" work order. So if a tech checks a fire alarm system during PM and the pull lever fails, they document the recurring work and close that work order out; then, they write a corrective order to fix the pull station. It's just a way of keeping the funds separate.
>
> M6WMC was entered by Mr. PWC-1 on 19 July 2005. We spent $7,250.91 on that job and 109 hours of labor and no

> material. The electrician was Mr. PWC-4. In 2005, the Recurring Shop had a maintenance limit of around $30,000 or less, I think, vice the current $1,000 limit. Over the years, the limit was reduced to its current level. So Mr. PWC-1 could have approved the money and work without coming to me for approval, which it appears he did.

189. Mr. PWO-6 discussed how a Priority was assigned to a job order. He said a 'Priority 2,' like M6WMC, means it's just above the Routine level; that is, it's not critical or time sensitive yet.[27] The Priority number tells the shop when it will be scheduled for repair:

> We use 1-Routine, 3-Urgent and 5-Emergency. Mr. PWC-3 started the work on 29 July and completed on 12 August 2005. There was no follow up work. From looking at the work order, it says the system was fixed. Therefore, I wouldn't think anything else needed to be done. Although the system needed to be replaced because it was old, PWC-3 returned the system to operability.

190. Notations entered in work order M6WMC state:

> PWC-3 08/12/05 01:52pm -- Complete: INSPECTED SYSTEMS TRACED WIRES REPAIRED BAD CONNECTIONS PULLED NEW WIRES REPAIRED & TESTED SYSTEM - SYSTEM IN DIRE NEED OF UPGRADE REPLACEMENT

191. Mr. PWC-3 worked on the alarm system on 29 July and from 9 to 12 August 2005. He found that the manufacturer of the system, Faraday, was out of business and he could not get replacement parts for what he determined to be an outdated system. He found that the system could no longer maintain electrical current to handle the load required to power all the horns and lights. In an attempt to provide an interim fix pending approval of the major system overhaul he thought was needed, Mr. PWC-3 terminated the nonfunctioning connections in the control panel and connected new wiring to provide enough power to the 3 main passageway horns without overloading the system. As a result, he said, even though the strobe lights still did not function, there would be at a minimum some audible alarms to service most of the spaces. In his opinion, the system was in dire need of replacement.

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[27] Priority 2 is the "default" setting for MAXIMO; it was assigned to all the work orders reviewed for this investigation. NAVINSGEN does not consider this a deliberate PWC decision to downplay the importance of the repairs.

192. In a phone conversation with NAVINSGEN in April 2007, Mr. PWC-3 said he found no evidence to indicate anyone had cut wires to the alarms in the Training Center classrooms. He explained that when the contractor doing renovations on the first floor in 2002 was installing more horns (alarms) in the building, it simply added them to the existing circuit when it should have installed a new circuit to power them. The result was to "overload" the existing circuit so that the old alarms on the second floor would no longer sound. Mr. PWC-3 reiterated his belief that the whole fire alarm system in Building 3232 should be replaced.

193. Mr. PWC-3 said the only work requests he had seen for the fire alarm system in Building 3232 were received on 31 March and 19 July 2005, respectively. He said he knew there were no other requests because he was the technician who had responsibility for Building 3232 during this time. The 31 March 2005 request related to a noise in the panel box and the 19 July 2005 request was to repair the 3232 fire alarm system.

194. According to Mr. PWO-9, these were actually corrective chits done under the recurring maintenance package that PWO funds for building systems maintenance. Shops submit and execute repair work against the funded package. The 31 March work chit has the technician's comments that: "located & repaired problem." The 19 July work order chit also indicates the required repairs were completed. According to Mr. PWO-9, the significance of these remarks in the work orders is that, in the absence of further communication from the Training Center or the PWC, people in the PWO would assume the fire alarm repairs were successful and needed no further attention.

195. Mr. PWC-3 disagrees with Mr. PWO-9' assessment. He says his statement that the system was in dire need of upgrade replacement should have alerted readers that the repairs he made were limited. He thought the renovation contractor should have installed an additional alarm panel or booster to handle the new alarms it installed. This would have avoided an overload of the existing circuit, which was the reason the second floor alarms stopped working. He hoped someone would authorize funds for new panels and new, up-to-date alarms, but they never did.

196. The Training Center video teleconference meeting minutes for 15 August 2005 reflect Mr. TC-5 reported "[h]is most excited announcement was PWC successfully tested the newly repaired fire alarm system in Bldg. 3232 this past Friday."

197. However, the minutes for 19 September 2005 reflect the need for an engineering study "to determine what needs to be done to the system."[28] No subsequent meeting minutes that reflect a discussion of the fire alarm system were provided to the CNIC investigator or NAVINSGEN.

198. Moreover, a note on a NAVFAC SW "project data sheet" obtained by the CNIC investigator states:

> ... On 25 Aug 05 the Federal Fire Department conducted a test of existing fire alarm system and concluded that it did not work in any classrooms. Both PWC and the Federal Fire Department have indicated that the system must be updated/replaced. Federal Fire Inspector, Mr. FFD-3 is familiar with the buildings FP system current condition. The facility serves hundreds of students every month and it is therefore imperative that the project be expedited. Please provide a cost estimate for all recommended work.

199. During a 3 April 2007 phone conversation with NAVINSGEN, Mr. FFD-3, a fire protection specialist who works with Chief FFD-1 in the fire protection division of the FFD, said he conducted a fire drill on 25 August 2005 at Complainant's request. The report he wrote and provided to NAVINSGEN includes remarks indicating alarms in the classrooms and second deck hallway were inoperative at that time.

200. Complainant said that when Mr. FFD-3 tested the alarm system in the Summer of 2005, the audible alarm could only be heard in the core of the Training Center and not in the classrooms. Additionally, she reported the inspector noted the alarm system was required to have flashing [strobe] lights in the classrooms and that these lights did not work, either.

201. Complainant believed she informed CAPT TC-1 and CDR TC-3 of the test results but cannot specifically recall doing so. Mr. PWO-9 says the PWO was not informed of the Fire Drill or the results.

202. NAVINSGEN asked Chief FFD-1 and Mr. FFD-3 if they were aware of a cost estimate, in the approximate amount of $20,000,

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[28] The minutes report CAPT TC-1 said: "Concerning the fire system in Bldg. 3232, it appears a study needs to be completed to determine what needs to be done to the system; the cost of such is around $2,750.00 ... if spending $2,750.00 in FY05 can help the process along, it appears to be a good investment."

to repair the alarms in Building 3232 that someone in the Federal Fire Department may have given Complainant in the Summer of 2005. Neither was aware of such an estimate and both stated the FFD does not provide project cost estimates.

203. In May 2007, Mr. TC-4 provided NAVINSGEN additional information that would explain why Mr. PWC-3 reported the repairs were "complete" but the Fire Department would find some alarms were not operating. Confirming Mr. PWC-3' statements to NAVINSGEN, Mr. TC-4 said Mr. PWC-3 concluded alarm panel was overloaded with too many alarms and disconnected some non-functioning alarms in order to power others so as to increase the overall second floor area in which alarms could be heard.

204. Mr. PWO-9 suggests that if someone in the PWO looked at Mr. PWC-3's 12 August 2005 report notes they would assume Mr. PWC-3 had successfully completed work to restore the alarms to operation. However, the OSH Office did not close out the October 2004 deficiency notice. The OSH Office may not have known of Mr. PWC-3' repair efforts since no evidence was developed that indicates PWC or PWO had an effective means of exchanging information with FFD or the OSH Office. Instead, it appears to have relied on tenant complaints to drive the system.

205. In the alternative, the OSH Office may have realized the repairs were not effective. But in that case, it did not pass this information on to the PWC or PWO for further action.

206. Based on the evidence presented, NAVINSGEN finds Mr. PWC-3 realized an additional alarm or booster panel was needed to power the horns and strobes that did not work. However, he did not think he was authorized to spend that much money given the age of the system, so he disconnected some alarms and reconnected others to increase the overall area of the building in which alarms could be heard to some degree. This could be construed as another "interim control" but no one appears to have treated it that way. NAVINSGEN finds Mr. PWC-3' efforts did reduce the risk to occupants.

September 2005 - Training Center Funds A Study

207. CAPT TC-1 was the Commanding Officer of NAVOSH Environmental Training Center Norfolk, VA from October 2002 to October 2005. When interviewed, he recalled that he learned about the fire alarm system malfunction around July 2005 when

Mr. TC-5 told him that the fire alarms could not be heard in all the Training Center classrooms.[29] CAPT TC-1 was aware of the SOP, the signage, and the fact that some, but not all, of the alarms were audible. He recalled meeting with Mr. TC-5 and an inspector, perhaps Mr. OSH-1, on a visit to the Training Center around July 2005. He asked the inspector what was necessary to repair the alarms. The inspector said he wasn't certain, and suggested a study to determine why the alarms weren't working and what it would take to fix them.

208. CAPT TC-1 said he directed Mr. TC-5 and Complainant to investigate the problem and find a solution. Mr. TC-4 says he contacted LT PWO-8 at the PWO, who said NAVFAC SW should do a "planning and estimating study." Someone at NAVFAC SW told him an engineering study to identify what was wrong would be necessary before an estimate of repair costs could be provided.

209. After being told NBSD did not have funds for an engineering study, CAPT TC-1 offered to pay for it using end of year funds. In September 2005, he sent NAVFAC SW funds for the study to expedite getting the system repaired, even though he thought funding the study was a NBSD "landlord" responsibility.[30] Although he requested that it be expedited, the study had not been completed when he was transferred in October 2005.

210. Eventually, someone decided the NAVFAC SW office in San Diego should conduct the study. Mr. TC-5 said he assigned Complainant to check on the status of the study project due to his numerous TAD assignments during this time frame. The 26 September 2005 Training Center work order, signed by CDR TC-3, indicates Complainant is the POC. In light of subsequent developments, it should be noted that documents relating to this work order indicate the Training Center is asking for an engineering study to determine the scope and cost of a "fire alarm system replacement" rather than a study that would determine how to repair the existing alarm system.

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[29] The video teleconference minutes establish that CAPT TC-1, who was a CDR at the time, is off by about two months.

[30] During a telephone interview with NAVINSGEN, CDR TC-3 explained they thought they were "helping out" NBSD, which was short on funds. He was surprised to learn NAVFAC SW never gave a copy of the study to the PWO, since he thought it was done in order to assist the PWO in determining what needed to be done. No PWO personnel interviewed for this investigation knew the Training Center had even asked NAVFAC SW to do the study.

211. Apparently, Complainant contacted NAVFAC SW to set up the project and indicate she was the Training Center POC for this project. She received a NAVFAC SW email dated 12 September 2005 that confirmed "our receipt of your recently submitted work order." The email identified Ms. FACSW-3 as the NAVFAC SW POC and said someone would be contacting Complainant "shortly to further coordinate our efforts and to answer any questions you may have."

212. NAVFAC SW project information describing the study obtained by the investigator stated, in part:

> Provide a Fire Protection audit of [the Training Center] ... Coordinate with [Complainant], the Occupational Health & Safety Specialist/Instructor on site and with their CO [Captain (sel) TC-1]. On 25 Aug 05 the Federal Fire Department conducted a test of existing fire alarm system and concluded that it did not work in any classrooms. Both PWC and the Federal Fire Department have indicated that the system must be updated/replaced. Federal Fire Inspector, Mr. FFD-3 is familiar with the buildings FP system current condition. The facility serves hundreds of students every month and it is therefore imperative that the project be expedited. Please provide a cost estimate of all recommended work.

213. Mr. TC-5 said he expected Complainant to keep him and the command appraised of the status of the study and to let him know if there were problems. He stated it was ironic that Complainant was the person bringing this fire alarm issue up for inquiry since, in his opinion, she as a Safety Specialist was in the proper position to monitor and, as necessary, "push" a resolution. He also said, however, that Complainant told him when she tried to check on the status of the project, she could not get anyone on the phone at NAVFAC SW.

214. Mr. TC-4 said that although in September 2005 the Commanding Officer paid for the engineering study, the Training Center did not receive the results of the study until 17 May 2006. He was aware that the 25 October 2004 NDN had rated this deficiency as a "RAC 2," and believed it was a high priority project for Public works to address.

215. Ms. FACSW-3 is a Business Line Team Leader for Capital Improvements employed at NAVFAC SW in San Diego, CA. She said she was aware of the Training Center request for an engineering study to be conducted regarding the fire alarm system in

Building 3232 spaces. She said it was entered in "E-Project," a database NAVFAC SW uses for its customer-requested projects. She described it as a means to track work requests and the actions that have been taken on those requests.

216. Ms. FACSW-3 said the Training Center's request came to NAVFAC SW on 16 September 2005 via Client Request & Evaluation Form (CREF) Number 532968 dated 12 September 2005. The study was funded by the Training Center for $2,750 and was to determine the scope and cost of a fire alarm system replacement throughout Building 3232, since the existing system was described on the Form to be outdated and beyond repair.

217. Ms. FACSW-3, as Team Leader, said she assigned the study to Mr. FACSW-4, who conducted the initial communications with the Training Center. While the Training Center requested a "delivery date" of 30 September 2005, Ms. FACSW-3 said both sides knew that date was unrealistic.

218. Ms. FACSW-3 provided an email from Mr. FACSW-4 to the Training Center that indicated the study would be completed approximately 90 days after the funds were received. Funds were delivered on 27 September 2005, which put the expected delivery date sometime during the 2005 Christmas/New Year holidays.

219. Ms. FACSW-3 said she met with Mr. FACSW-4 in mid-February 2006 to check on the status of the project after learning Mr. FACSW-4 was leaving NAVFAC SW for other employment. She said he had numerous projects pending at the time and had not completed the Building 3232 study. At that point, Ms. FACSW-3 assigned the project to Mr. FACSW-5, another fire protection engineer, but in April 2006 Mr. FACSW-5 left NAVFAC SW as well, without finishing the study.

220. Mr. FACSW-1 is a senior fire protection engineer at NAVFAC SW.[31] He said he volunteered to take over the study after Mr. FACSW-5 left. Mr. FACSW-1 said he surveyed Building 3232 on 11 May 2006 and emailed his completed report to Mr. TC-4 at the Training Center on 17 May 2006. Mr. TC-4 provided the CNIC investigator copies of the email and the report.

221. In reviewing the history of the request, Mr. FACSW-1 opined that due to the heavy workload on the engineers at NAVFAC SW at the time, and notwithstanding the "imperative to expedite"

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[31] As discussed elsewhere in this report, Mr. FACSW-1, the AHJ, should have been asked to review and approve the Training Center interim SOP.

notation on the CREF, neither NAVFAC SW nor the Training Center ever prioritized or pushed the project.

222. Mr. FACSW-1's report said the Building 3232 alarm system was "antiquated and unreliable." He also said the system lacked a required secondary power supply, as required by NFPA 72, and its horn circuit was overloaded and inadequate to support all audible alarms (horns). Mr. FACSW-1 concluded that the current system had to be replaced and that it would be a "waste of time and money" to try to repair the existing system because its "age makes it failure prone and difficult to find repair parts." He estimated the cost to replace the system would be $76,711.89, and, if a Mass Notification System capability was added, $104,910. Mr. FACSW-1 did not estimate the cost of simply repairing the existing alarm system, or describe how such repairs could be made. On 12 October 2006, after the investigation started, Mr. FACSW-1 provided a slightly higher cost estimate for the complete replacement of the system, based on escalated material cost projections.

223. In May 2006, Complainant no longer worked at the Training Center, so after receiving Mr. FACSW-1's email, Mr. TC-4 gave the report to Mr. TC-5 and CDR TC-3. All of them assumed this was a "courtesy copy" of a report that Mr. FACSW-1 would send to the NBSD PWO, which they thought was responsible for performing the work. Mr. FACSW-1, however, gave the report only to the Training Center, since it was the "customer" who had requested and paid for the study. Consequently, NBSD personnel did not receive a copy of Mr. FACSW-1's report until October 2006, after this investigation had started.[32]

Tenant Liaison Officer Testimony

224. LT PWO-8 was the PWO Tenant Liaison for Building 3232 from June 2003 to June 2005. He does not have any emails for the relevant time period, and does not specifically recall the May 2005 emails he sent or received about Building 3232 alarms. He recalls making two or three requests for "trouble calls" to repair the alarms in 2005, but does not recall whether he was able to get someone to go to the building. He does recall discussions indicating Building 3232 was part of a base-wide upgrade project and, as previously discussed, recalled a

[32] Whether NBSD would have done anything with the report had it received it is speculative at best, considering upgrades to the Building 3232 fire alarm system were already included in the proposed base-wide system upgrade which was still awaiting funding.

decision to defer repairs to the base-wide upgrade after viewing the NAVOSH Tools screenshots.

225. ENS (now LTJG) PWO-2 relieved LT PWO-8 in June 2005, and was the Tenant Liaison for Building 3232 from June 2005 until June 2006, when LTJG PWO-1, the current TL Officer, relieved him.

226. When interviewed in May 2007, LTJG PWO-2 explained he was a point of contact for the PWO and, as such, was tasked with resolving base maintenance issues for customers. He said that normally customers called the trouble desks and submitted work requests. Occasionally, he would get involved with customers if it was a high level issue that needed attention or they felt the problem wasn't being addressed properly.

227. LTJG PWO-2 said he had about 80 buildings to monitor. He didn't have that degree of access to MAXIMO that would allow him to input work orders and cannot recall ever personally putting a work order into the system. Instead, he would submit requests for work to the PWO Maintenance Control Director, Mr. PWO-6, who would input them into MAXIMO for him. LTJG PWO-2 did, however, have access to MAXIMO sufficient to allow him to look at work orders that others put into MAXIMO at his request.

228. LT PWO-8 did not discuss any Building 3232 issues with LTJG PWO-2 during their turnover in June 2005. LT PWO-2 does not recall the 12 July 2005 email Chief FFD-1 sent to him. Nor does he recall any specific conversations he may have had with Chief FFD-1 about Building 3232. However, he recalls thinking the problem was related to a funding issue, which was the reason the alarms hadn't been fixed immediately. He recalled that at a later date, he had the impression the PWC Recurring Maintenance Shop fixed some or all of the Building 3232 alarm issues.

229. LTJG PWO-2 recalls that Mr. TC-4 was the first person to mention Building 3232 fire alarm issues to him. He remembers Mr. TC-4 saying there was a "fire alarm" or "fire control" problem, but doesn't remember details of the problem.

230. LTJG PWO-2 said he spoke with Mr. PWO-6 on "numerous" occasions. He remembers saying to Mr. PWO-6 words to the effect that "there's something wrong with the 3232 fire alarm system" on several occasions. Mr. PWO-6 would respond by acknowledging there was a problem, but then would tell him it was the responsibility of the Recurring Shop, a PWC organization that did not fall under the authority of the TL Officer. LTJG PWO-2

thought there was something wrong with that response because of what he had heard about the matter from Mr. TC-4. LTJG PWO-2 thought leaving the alarm problem unresolved created an unsatisfactory situation, whether or not there was money available to fix the problem.

231. When asked about the 13 July 2005 email Mr. PWO-6 sent him, LTJG PWO-2 said he remembered thinking the Building 3232 alarms had been repaired, but could not remember any details.

232. When asked for his opinion, LTJG PWO-2 noted that in his current position, he is a PWO customer, and "can't get things fixed." He suggested the problem with getting things repaired lies with the lines of communication. Once a work request is entered into the system, a technician may investigate the problem, but as the customer, he can't tell if the technician is reporting what he finds back to the TL. As the TL, he was the liaison between the customer and the Recurring Maintenance Shop. Sometimes, he got inaccurate information and the flow of information was not fluid. LTJG PWO-2 said that as a TL, he took pride in his work, but now, as a customer, he sees communication problems he finds frustrating.

233. LTJG PWO-2 does not recall discussing Building 3232 alarms with CDR PWO-4, the Public Works Officer.

234. LTJG PWO-1 is the current Tenant Liaison for Building 3232, having relieved LTJG PWO-2 at the end of May 2006. She explained that, as a TL Officer, she ensures information, requirements, and special needs are relayed between the PWO and tenants of assigned buildings. The TL Officer provides information to the Maintenance Control Director, Mr. PWO-6, concerning special command requirements. TL Officers also disseminate reports, gather information to relay to the Maintenance Control Director, attend a Work Induction Board for all new work put into the MAXIMO system, conduct Zone Inspections with the NBSD CO, and apply their technical knowledge to develop project scopes and track tenant projects.

235. LTJG PWO-1 had not seen the 12 July 2005 email from Chief FFD-1, and did not discuss Building 3232 fire alarms with LTJG PWO-2. She says the only Building 3232 project they discussed in May 2006 was a new project to renovate the 2nd deck Naval School of Health Sciences (NSHS) area. She knew nothing of the July 2005 repairs. LTJG PWO-1 knows Mr. TC-4. He did not discuss Building 3232 fire alarm repairs with her.

236. LTJG PWO-1 first became aware of the Building 3232 fire alarm problem in October 2006, when informed by her supervisor, LT PWO-11. She worked the problem from that point forward, and participated in the November 2006 walk-through to check the audibility of horns after the repairs. The repair technician and someone from the Base Safety Office also participated in the walk-through. They found the system adequate at that time.

237. Mr. PWO-7 served as the NBSD Facilities Manager from 2003 until May 2007, when he became a TL Officer. He knows Chief FFD-1 and remembers talking about the Building 3232 fire alarm problem with him. He said that since 2003, NBSD has had a base-wide problem with the fire alarm loop system that connects to buildings on the base.

238. Mr. PWO-7 recalls sending several recurring shop work orders to the Recurring Maintenance Shop Foreman or Mr. PWC-5, a Recurring Maintenance Shop technician, to address the fire alarm problems in Building 3232 beginning around July 2003. He said people working in a building could call a TL Officer or the trouble desk to ask for assistance. Mr. PWO-7 believes LTJG PWO-8 may have sent him information about the alarm problems in Building 3232, and Mr. PWO-7 then would put requests into the MAXIMO system with a copy to the recurring shop noting the work order number.

239. Mr. PWO-7 said it was hard to remember how many requests he put into MAXIMO for the Building 3232 fire alarm system because he handled 15-20 requests a day, but he did remember entering work orders to address the alarm problem. Mr. PWO-7 did a quick scan in MAXIMO while talking to an investigator in May 2007, and found the 26 October 2006 Work Order (number VFHLX) that was used to repair the alarms in 3232. He also saw about 300 work orders for Building 3232, including a number of work orders dating to 2004 that mention the fire alarm system.

240. Subsequently, Mr. PWO-7 and LTJG PWO-1 reviewed over 50 Building 3232 work orders that mention fire alarms. All but three work orders represented routine preventive maintenance (PM) work that did not involve making specific repairs to the fire alarm system.

PWO Maintenance Control Director Testimony

241. Mr. PWO-6 has been with NBSD since 1993, and has been the PWO Maintenance Control Director since 2001. He controls funding and directs the NBSD maintenance effort to include

recurring, corrective and minor maintenance for buildings at NBSD. Mr. PWO-6 reports to Mr. PWO-9, the Deputy Public Works Officer. At the outset of his interview in May 2007, Mr. PWO-6 had no specific recollection of Building 3232 fire alarm problems before January 2007, when Mr. FACSW-1 asked him to accompanying him on an inspection of the repairs made at the end of 2006.

242. After the inspection, Mr. PWO-6 understood the alarms tested properly and everything was okay. He recalls a work order was created for this effort in October 2006 and thought the technician who did the repairs closed the work order out in the system, called MAXIMO, which is an electronic system that tracks all work orders.

243. Mr. PWO-6 also recalled the Building 3232 alarm system was included in a $7 million base-wide fire system upgrade. He understood Building 3232 would get some new components such as horns/strobes, lights and a new alarm panel. He also thought the existing alarm panel would be re-located.

244. Mr. PWO-6 explained the general process used by PWO to manage the ongoing repair process for the base. He participates in "new work" maintenance meetings each week, where TL Officers discuss their jobs with him.[33] The TLs each have an area on the base and are assigned a certain group of buildings. They receive and process work requests from the BMs at those buildings. Mr. PWO-6 or his facility manager, until recently Mr. PWO-7 and now Ms. PWO-10, enter work orders in MAXIMO for the discrepancies TL Officers report to them. He explained:

> The Recurring Shop performs PM and minor maintenance that has a limit of $1,000 or less and they can write their own work orders for that. If it's more than $1,000, then the Foreman, Mr. PWC-1, calls me and I approve or disapprove the work. Some years ago, the amount of money the Recurring Shop could spend to repair a job was $30,000-$40,000. So they could spend up to that amount without getting approval from me. But over the years, the amount was eventually reduced to $1,000.

245. Mr. PWO-6 believes that if the TL Officers related a problem like the fire alarms in building 3232, Mr. PWO-7 would enter the discrepancy as a corrective or recurring work order.

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[33] Mr. PWO-6 observed that TL Officers work for LT PWO-11, the Assistant Public Works Officer, and Mr. PWO-9, the Deputy Public Works Officer.

He explained that he decides work order priority based on whether it is related to safety and health, security, mission or quality of life. He stated that safety and health get top priority and usually his facility manager enters the work orders into MAXIMO:

> I meet with the TLs weekly and they turn-in all work to me and I decide the priority. ... The TLs work for LT PWO-11 and Mr. PWO-9. The work requests are entered into MAXIMO by my facility manager, Ms. PWO-10, who replaced Mr. PWO-7.

246. Mr. PWO-6 also would have talked to Mr. PWC-1 in the Recurring Shop:

> When there's a job order where we're experiencing a particular problem, I talk with Mr. PWC-1. He's the Foreman for the Recurring Maintenance Shop that tests and repairs the base fire alarm system installed in the buildings. With respect to the bldg 3232 fire alarms, if we received a discrepancy report from one of our techs or from a Building Monitor, I would have entered a job into the system ... and written it to get the job done and the problem corrected. If I was told the fire alarm system in the building was okay, I wouldn't have entered a job order. That's why I say if I talked to Terry and he said the 3232 building fire alarm was repaired or fixed, I wouldn't have entered a job. There's no reason to do so.

247. Mr. PWO-6 said he had some general knowledge of the investigation, and thought it very odd that there were so few work orders in the system, since he and the TL Officers would have had no reason to ignore a problem. Mr. PWO-6 routinely has work orders for repairs entered into MAXIMO and considers it his job to move on an issue and get it fixed.

248. After reviewing the evidence presented him, including the work orders and email traffic for 2005, Mr. PWO-6 said he thought only one of two things occurred. Either he never got a request for a work order or, after discussing a work order with Mr. PWC-2 or Mr. PWC-1 in the Recurring Maintenance Shop, he concluded the alarms had been repaired and a work order was no longer necessary.

249. Mr. PWO-6 vacillated between thinking he never got a request or that he was told the system was okay and everything was fixed:

> It doesn't make sense to me that a discrepancy - especially an ongoing problem - didn't get into the work order system. I'm thinking we just never got a request for a job or didn't know the fire alarm system was broken or was having ongoing problems. It's the only thing that makes sense to me. If I had gotten something from the TL Officers, it would have been placed in the MAXIMO system to get it resolved. It wasn't a matter of priority, because I would have put a fire alarm problem at the top. Fire alarms involve safety and that's number one in the shop. ... Nothing else makes sense, or, like I said, I called the shop and they said it was fixed and the problem was solved. ....
>
> My understanding was that all of the issues associated with the alarms in building 3232 had been addressed ... and ... the Recurring Shop had fixed the problem. ....
>
> With respect to the $7 million base wide maintenance project that's been approved, I was never told not to perform or to delay maintenance on any base alarm system because it was part of the base project and would therefore eventually get fixed. We wouldn't delay repairs awaiting an upgrade or renovation. We would merely fix the system when it was reported. We have no other alternative other than to address the problems.

250. Mr. PWO-6 knew Mr. FACSW-2 finally got the alarms working in Building 3232 around November 2006. He also knew that after those repairs were completed, the Dental Clinic, which occupies the same building, made some renovations on the 2nd deck and also needed additional alarms, emergency lighting and strobes installed. He recalled learning of this following a fire department inspection in March 2007.

251. When asked whether he remembered any conversation about the alarms in Building 3232 with TL Officers PWO-8 or PWO-2 while they were assigned to the PWO, Mr. PWO-6 said that he really did not remember "anything that jumps out at me" about Building 3232 fire alarm problems before January 2007, when he went on the inspection with Mr. FACSW-1.

252. NAVINSGEN reviewed a number of emails with Mr. PWO-6, including the July 2005 emails he received. Mr. PWO-6 did not recall the emails themselves but made some comments about their contents. With regard to the 12 July email, he said:

When Chief FFD-1 is talking about PWC, he's referring to the Recurring Shop. I probably made some phone calls to the recurring shop and said we have no paperwork showing a problem. If not, we would have made the system operational. We've never changed any components on that system that I know of. If Chief FFD-1 is correct, then another explanation was the shop at the time just may not have been capable to repair it, which I doubt. I wouldn't sit on a problem like this. I've worked on these alarm systems for 6-8 years.

253. Concerning the 13 July 2005 email, Mr. PWO-6 said:

I don't remember this email, but it sounds like I got in touch with Mr. PWC-1 after receiving Chief FFD-1's email and it appears Terry thought the system was already fixed.

The only thing that would take precedence over this type of discrepancy would be a bad chemical leak or a pipe that burst and exposed people to danger. It would have to be something in the category that created an immediate danger. Say, for instance, a damaged electrical system where raw electrical cables were hanging or exposed and may hurt someone. Other than that, fire alarms go to the top of the list.

254. When asked if he had any explanation for the reason there are only three work orders for the Building 3232 fire alarms in MAXIMO that address repair efforts (August 2004, July 2005, October 2006), he responded:

That's hard to answer. From my perspective...the only explanation I can offer is that our records indicated the problem was fixed or there was an ongoing/existing problem that was never communicated to us. To repeat myself, if we had known of a safety related fire alarm problem, we would have fixed it.

255. When asked whether there is a code on the work orders that identifies who created them in MAXIMO, Mr. PWO-6 said there is and went on to explain:

The MAXIMO system "auto generates" certain information and stores it in history such as who wrote the work order. It should show that info at the bottom of the MAXIMO page. It may not show it on a printed work order though. You can go to MAXIXO and enter the work order number and it'll show you who originated the work order.

256. Mr. PWO-6 said he created work order number VFHLX in MAXIMO on 26 October 2006:

> This is the order that Mr. FACSW-2 gave me and asked me to write. .... So it looks like maybe Mr. PWC-5 found the old discrepancy [FKSKJ, reported in August 2004] and we rolled it over to this job order. .... It should have been included on the original order and closed. I don't know why Mr. PWC-5 opened a new job order to record what action was taken. We spent 80 hours on labor ($5,920) and $3,434 in materials for about $9,354 total cost to fix it.

257. Mr. PWO-6 added that the fire alarm systems are checked all year long:

> There are several different tests that the techs perform on them. You have to ensure the system works twice a year. There is a semi-annual test and annual certification. The Recurring Shop techs, Mr. PWC-3, Mr. PWC-4, etc., are the techs that perform the annual certification and record the results. If the system fails the test, "I SHOULD BE GETTING A DISCREPANY REPORT ON MY DESK UNTIL IT'S FIXED!" [emphasis added] That's my job; to get the work into the system. I would have no reason not to. It's routine business; fix the problem.

258. In summation, Mr. PWO-6 stated:

> If a fire inspector, like Chief FFD-1, issues a fire inspection report to a BM and gives him a copy of the discrepancy, the BM would, hopefully, report it to the TL and we would get someone over to check it out and fix it. If it's a major or immediate problem, it gets a higher priority and the same process applies. So, it's possibly we could see an OSH report or fire department discrepancy report stating the nature of a problem, but only if it is given to the TL and they bring it to me. Otherwise, we don't see these types of reports. I've maybe seen a dozen or so since I've been here. Not very many. There's no automatic or routine distribution system concerning these types of reports. We are not in that loop.

259. Based on the evidence presented, NAVINSGEN finds the August 2004 and July 2005 work orders concerning the fire alarm discrepancies were entered into MAXIMO by Mr. PWC-3 and Mr. PWC-1 in the PWC Recurring Shop, and were not the result of any action taken by the PWO. The August 2004 request, FKSKJ, was

not closed out in MAXIMO and therefore was automatically rolled over each work year until Mr. PWC-5 closed the order in October 2006 after repairs were completed. NAVINSGEN also finds the PWO does not have a process to identify these types of open discrepancies that are automatically rolled to the next year by MAXIMO and must manually enter the system to search for them. Therefore, Mr. PWO-6 and other management personnel rely on the shop technicians to track each work order until the job is completed and the order is closed.

Public Works Officer Testimony

260. Mr. PWO-9, the Deputy Public Works Officer, said that under the current CNIC organization, NBSD, as the "landlord," is responsible for most repairs needed at tenant commands such as the Training Center. The fire alarm system at Building 3232 is part of the PWC recurring maintenance program funded by PWO; PWC technicians can do repairs under $1,000.00 on their own, and repair work over $1,000.00 after receiving PWO approval. Work on a system such as the one at Building 3232 is a PWO responsibility, but must be initiated with a work order. Mr. PWO-9 said that while Mr. OSH-1's 25 October 2004 NDN says a work order was submitted to the PWC, he searched PWO and PWC work order records and found no work order or work order request for that time frame.

261. Mr. PWO-9 said he never saw the 2003 or 2004 deficiency notices Mr. OSH-1 issued. These NDNs should have caused someone to submit corrective work orders, not recurring maintenance work orders, to repair the alarms. However, unless the right people (PWO) were informed of the NDN it is unlikely this happened. His search of the facilities database, MAXIMO, shows no corrective work orders submitted to repair or replace the fire alarm system in response to the deficiency reports. It shows only the recurring maintenance corrective chits (work orders). The first record he found of a specific repair project (a "corrective" work order, not part of recurring maintenance efforts) was in October 2006, after NBSD learned of the OSC complaint. The project resulting from that work order rewired the existing strobes and horns.

262. Mr. PWO-9 stated that the modernization and upgrade of the Building 3232 fire alarm system was a part of a larger, base-wide fire alarm modernization project. This "special project" had been proposed for the past 3 years, but had never been funded by higher authority. In October 2006, he said he still expected the project to be funded and was optimistic it would be

approved for award in FY 2007. He provided an estimate dated 3 March 2004 that shows the Building 3232 "piece" of the upgrade effort, which would replace the existing system with one meeting then-current code requirements, would cost $22,287.90.

263. CDR PWO-4 was the Public Works Officer from June 2004 to April 2006, when she went on a six month overseas assignment. She responded to the NRSW investigator's written questions in May 2007. In general, CDR PWO-4 said she could not recall specific issues relating to maintenance of individual buildings and did not recall the question of fire alarms in building 3232, by itself, being mentioned.

264. CDR PWO-4 explained that the PWO TL Officer, who is three levels below the Public Works Officer in the PWO chain of command, is responsible for resolving specific issues at the buildings for which they are responsible. She believed Building 3232 was part of the "medical block" assigned to ENS PWO-2. CDR PWO-4 expected the TL Officers to identify deficiencies with tenants and program any required maintenance repairs. She said the timing of repairs would depend upon the cost, priority, and availability of resources to perform the work. She said TL Officers are to continue carrying repair requirements on a prioritized project list until they are funded. She said TL Officers also should resolve PWC recurring maintenance issues with the assistance of the PWO Maintenance Director, Mr. PWO-6.

265. When asked her opinion on who would be responsible to repair the fire alarms, CDR PWO-4 said this would depend on how any MOU or ISSA for the tenants in Building 3232 were written, as well as the designation of the Maintenance UIC (Unit Identification Code) on the real property record cards for Building 3232. CDR PWO-4 no longer had access to this information for NBSD buildings, and said researching this information and maintaining it in the record is a basic responsibility of the cognizant TL Officer.

266. CDR PWO-4 was aware of the base-wide alarm system upgrade project, recalled discussing that project with others, including the NBSD Commanding Officer, and said she worked closely with NRSW to get funding for that project. Pending completion of that project, she recalled NBSD regularly sent advisory messages to tenants to ensure they called the Fire Department after evacuating any building since the alarm loop system did not reliably provide automatic notifications to the base emergency services desk or Fire Department. CDR PWO-4 thought they may

have included work to replace local alarm panels in some buildings, but could not recall if Building 3232 was one of them.

267. CDR PWO-4 said her practice was to copy her Deputy, Mr. PWO-9, on most of her emails. She noted that the purpose of having a civilian Deputy in the PWO was to ensure continuity for long-term projects. For that reason, turnover discussions with her successors, CDR PWO-5 or CDR PWO-3, would not have included issues pertaining to repair and maintenance of individual buildings.

268. NAVINSGEN sent CDR PWO-4 a copy of the NAVOSH Tools screenshots and told her what LT PWO-8 and Mr. OSH-1 had to say about them. Although they did not spark any specific recollection of the matter, she said it is more likely that LT PWO-8 was speaking of the base-wide upgrade contract because the PWO was pushing hard to get it funded at that time. Later that day, she was able to obtain copies of documents that reminded her she thought funding might become available at the end of FY 2004 or early in FY 2005. For that reason, she would have decided it would be wasteful to spend money to repair a system that would soon be replaced, or to break the work out for award under a separate contract.

269. CDR PWO-5 is the Assistant Regional Engineer at NAVFAC SW. After CDR PWO-4 went overseas in April 2006, he served as the Public Works Officer until CDR PWO-3 reported to the PWO in August 2006. CDR PWO-5 did not know of any problems with alarms in Building 3232.

270. CDR PWO-3 has been the Public Works Officer since August 2006. He did not know of any problem with alarms in Building 3232 until October 2006, when he learned of this investigation.

NBSD Commanding Officer Testimony

271. CAPT NBSD-1, USN (Ret) was the NBSD Commanding Officer from April 2002 to October 2005. When interviewed in May 2007, he could not recall any discussions of fire alarms in Building 3232 during his tour of duty. He did say fire alarm systems were a significant issue base-wide and needed replacement due to age. CAPT NBSD-1 said there were several alarm failures and remembered replacing alarms in a barracks and a building used by NRSW personnel.

272. CAPT NBSD-1 remembers discussing pier, traffic and jogger safety issues with Mr. OSH-2 or his predecessor, Mr. OSH-4, but

does not recall discussing fire alarm issues with either of them. He indicated most of alarm discussions were with his Public Works Officers, including CDR PWO-4, but he does not recall being presented any information about fire alarm problems in Building 3232. He said NBSD personnel devoted considerable energy toward ensuring people were afforded protection while alarm systems were repaired or upgraded in 2003 and 2004, to include planning for the base-wide upgrade.

273. CAPT NBSD-2 had been the NBSD Commanding Officer for approximately twelve months in October 2006, when the CNIC investigator first contacted him about this case. CAPT NBSD-2 said that, basically, under current shore installation alignment, NBSD is the "landlord" for the tenant commands such as the Training Center and is responsible for repair and maintenance of the buildings occupied by those tenant commands through the NBSD PWO. He reiterated that repair work is done based on job requests and work orders submitted to PWO by the tenant commands. It is the tenant command's responsibility to let him or his people know when repairs are needed.

274. CAPT NBSD-2 stated that, prior to his taking command and during the turnover process, he learned that the base-wide fire alarm system needed repair and upgrading, and a major repair and/or upgrade project, estimated to cost approximately $4 million, had been submitted to CNIC for approval. CAPT NBSD-2 said he knew the planned base-wide upgrade was to ensure that the automatic notification feature (notification to the FFD Dispatch office and fire stations) was functional and reliable. Although the project had not been approved for funding in past years, it was submitted for funding in FY 2007 and he was optimistic that the FY-2007 budget would fund the project.[34]

275. Once in command, CAPT NBSD-2 said he held Complex Advisory Board (CAB) meetings every 2 or 2 ½ months with the heads of all his tenant commands and afloat units at NBSD. At the CABs, matters of area concern and interest were raised, issues were discussed, and problems or complaints were raised. None of the tenant commands told him of any internal fire alarm problems, at Building 3232 or other facilities. No one told him of any deficiency notices issued for Building 3232 alarms.

276. CAPT NBSD-2 said that as recently as September 2006, he had publicly stated, by email, naval message, and personal

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[34] As discussed, a base-wide upgrade contract was awarded on 28 June 2007.

communication, his understanding that all audible internal alarms in NBSD buildings were functioning correctly. He gave some of the emails to the CNIC investigator. He said his naval messages and emails were sent to Mr. TC-5 at the Training Center, and that he had personally met with the Training Center CO and his staff at least twice. They never brought the fire alarm problem to his attention. He stated that the particular problem with the Building 3232 fire alarm system was not mentioned to him until he was informed of this investigation on 9 October 2006. He also said the PWO did not receive a copy of Mr. FACSW-1's May 2006 study before the investigation started.

277. CAPT NBSD-2 provided NAVINSEN copies of his email notices and naval messages that indicate they were sent to Mr. TC-5. When asked, Mr. TC-5 said he did not recall seeing any of them, and observed that his computer had been undergoing repair for some time in the August-September 2006 timeframe and his ability to review email had been severely hampered. NAVINSGEN noted that Mr. OSH-2's name also appears on those emails in a manner that suggests he helped prepare them. He did not tell CAPT NBSD-2 alarms in Building 3232 were not operational, either.

278. CDR TC-2, the current Training Center CO, reports he visited NBSD and met with CAPT NBSD-2 in January and June 2006. He did not mention the fire alarms on either occasion. In January, he was still waiting for NAVFAC SW to perform the engineering study. In June, after receiving the study, he assumed that NAVFAC SW had already given it to NBSD for action.

279. Based on the evidence presented, NAVINSGEN finds CDR PWO-4 should have alerted the NBSD CO that the alarms were inoperative and that she concluded repair could be deferred to the upgrade. Because this was a RAC 2 hazard, or a RAC 3 hazard taking interim controls into consideration, the decision to postpone repairs should have been made by the NBSD CO since the NAVOSH Program Manual made him responsible for managing the hazard.

280. NAVINSGEN agrees with Mr. PWO-9' assessment that the deficiency notices should have caused someone to submit corrective work orders instead of recurring maintenance work orders to repair the alarms. However, contrary to Mr. PWO-9's suggestion, NAVINSGEN finds the PWO was adequately informed of the deficiency through the efforts of:

(1) Mr. OSH-1 in November 2004, when he contacted LT PWO-8, the TL Officer;

(2) Mr. OSH-2 in late 2004 or early 2005, when he contacted CDR PWO-4, the Public Works Officer;

(3) CDR TC-3 and Chief FFD-1 in May 2005, when they also contacted LT PWO-8; and

(4) Chief FFD-1 in July 2005, when he contacted LTJG PWO-2, the new TL Officer, Mr. PWO-6, the PWO Maintenance Control Director, and Mr. PWO-7, the PWO Facilities Manager.[35]

281. Given that a corrective work order was never issued as a result of PWO efforts, NAVINSGEN concludes the PWO decided to defer any repairs, other than those that could be made as the result of the routine PWC preventive maintenance program, until the alarms would be replaced as part of the base-wide upgrade. If there was any question about the status of repairs between May and July 2005, basic courtesy, if not common sense, suggests someone in the PWO should have called the tenant and asked if the repairs had been accomplished before deciding it was not necessary to issue PWC a corrective work order or ask NAVFAC SW to award a repair contract if PWC could not do the work.

March 2006 - Complainant Files DoDIG Hotline Complaint

282. On 10 March 2006, after leaving her Training Center position, Complainant contacted the Defense Hotline, operated by the Inspector General, Department of Defense (DoDIG).

283. Most of the concerns Complainant raised with DoDIG related to her treatment by Training Center personnel and are not pertinent to this investigation. However, her complaint did include the following statement:

> No working fire alarm system in school house - unsafe/unhealthful working condition known to Captain TC-1 and he did not act on this to rectify problem. Hazardous materials were not labeled/improperly stored (paint in locker in lab area) no MSDS for materials, no authorized use list for Haz Mat or was any training given for hazardous materials.

284. On 4 May 2006, DoDIG tasked NAVINSGEN to investigate the complaint. On 16 May 2006, NAVINSGEN sent it to the Bureau of

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[35] NAVINSGEN does not discount Mr. TC-4's testimony that he contacted TL Officers frequently, but does not rely on that testimony since it is unnecessary in light of the compelling documentary evidence.

Medicine (BUMED) IG because the Training Center was still a subordinate command of BUMED at that time.

285. On 24 October 2006, NAVINSGEN received a report of the BUMED IG findings. With respect to the fire alarm system, the report indicated the allegation that CAPT TC-1 did not act on the problem was not substantiated because NBSD, not the Training Center, was responsible for repairing the fire alarm system. The report did, however, include a recommendation that CAPT TC-1's successor "should ensure that the defects within the fire alarm system are rectified by the base fire station within a timely manner." The report did not address the hazardous materials Complainant mentioned in her complaint.

286. By this time, NAVINSGEN had received the OSC tasking and decided the BUMED investigation had been superseded by the current investigation, undertaken for OSC. NAVINSGEN does agree with the BUMED IG conclusion that NBSD is responsible for repairing the fire alarm system.

287. Materials Complainant provided to DoDIG and forwarded to NAVINSGEN and the BUMED IG include a "timeline" Complainant prepared that includes the following assertion:

> No emergency lighting system was installed anywhere in the Navosh and Environmental Training Center. Supervisor TC-5 and Commanding Officer Capt. TC-1 were notified and aware of this situation, but no corrective action was taken.

288. This complaint appears to be the same issue raised by Mr. FFD-3 in his 7 September 2006 and 9 March 2007 inspection reports. The absence of emergency lighting does not appear in either of the NDNs Mr. OSH-1 wrote, or in the survey Mr. FACSW-1 conducted. However, emergency lighting is a matter addressed by the NFPA.[36]

October 2006 - Investigator Observes Fire Alarm Test

289. On 12 October 2006, the CNIC investigator observed a test of the Building 3232 fire alarm system conducted at his request. The test consisted of setting the alarms to the "test" mode at the fire alarm control panel, then walking through the building to see which audible alarms (horns) and strobe lights were actually working. The test lasted approximately thirty minutes.

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[36] NAVINSGEN asked NBSD and the Training Center to address the Hazmat and lighting issues. Their actions are reported later in the report.

290. While the alarm system was set to the test mode, the CNIC investigator and other test participants walked through all of the Training Center spaces, including the classrooms which, according to the original complaint, were the areas where the horns could not be heard. The other walkthrough participants were Mr. TC-5, Mr. PWO-9, Mr. FACSW-1, and Mr. PWC-3, the electrician who worked on the building's fire alarm system and who, in July and August 2005, made what he considered to be temporary repairs to the system that activated some of the audible alarms. During this walkthrough, Mr. PWC-3 informally briefed the investigator on his efforts to repair the alarm system, recounted earlier.

291. The test revealed that only 3 fire alarm horns functioned. Two were located in the main passageways of the Training Center and a third was in a main passageway separating the Training Center spaces from the Dental Clinic classroom spaces. None of the strobe lights worked. No horns in classrooms functioned.

292. The audible alarms could be heard in some, but not all, of the classrooms. As the group moved farther away from the main passageways the alarms became less audible until, at the most remote classrooms, one had to strain to hear even a faint horn sound despite the fact the school was closed and no students were in the building. Other alarms on the same circuit, but positioned in other building areas, did not function, either.

November 2006 - NBSD Restores Alarms to Working Condition

293. The CNIC investigator provided CAPT NBSD-2 the results of the test on 13 October 2006. CAPT NBSD-2 said he would have the system repaired and provide test results for inclusion in this report by early November 2006.

294. CAPT NBSD-2 directed CDR PWO-3, to assist. By emails dated 30 October and 2 November 2006, CDR PWO-3 stated that a repair project for the Building 3232 fire alarm system had been prepared, a solution had been identified and the work was scheduled to be completed during the first week in November 2006. He said the expected cost would be approximately $9,000; $3,000 for materials and $6,000 for labor.

295. On 26 October 2006, pursuant to CAPT NBSD-2's direction, CDR PWO-3 gave the investigator a copy of Work Order VFHLX, previously discussed by Mr. PWO-6. The work order was based on an assessment performed by Mr. FACSW-2, a fire alarm technician,

who provided the following information in the "problem description" area of the work request form:

> ... I believe that we can resolve the issues at hand in the short term by changing the Fire Alarm Control Panel (FACP) with one that we have on hand and possibly adding a Signal Notification Appliance Circuit (SNAC) panel in the field if additional power is required to drive the existing Audible Devices. I am assuming that if all of the existing audible devices were working properly the sound level would be sufficient to evacuate the building. A SNAC panel allows for Audible devices to be driven/powered remotely from the panel without increasing the load on the panel. It is my opinion that changing the FACP would additionally provide for more reliability and better performance than what is existing.

296. The work was scheduled to take place between 30 October and 3 November 2006 and, as suggested by Mr. FACSW-2, would replace the existing (inadequate) fire alarm control panel and, if necessary, add a Signal Notification Appliance Circuit (SNAC) as an electrical booster panel to drive the audible alarms. The replacement fire alarm control panel was expected to be procured locally in San Diego and installed during the week of 7 November 2006; however, the booster panel would be put in place 30 October-3 November 2006 with the expectation that it would provide sufficient power to operate all audible alarms and strobe lights. CDR PWO-3 said CAPT NBSD-2 directed him to expedite the repairs.

297. Mr. FACSW-2 and another technician performed the repairs as scheduled and the fire alarm system was tested on 17 and 20 November 2006. The tests were conducted by Mr. PWO-9, Mr. FACSW-2, and another Alarm System Mechanic, Mr. PWC-6. The tests confirmed the repairs were successful: all of the alarm horns were functioning and audible in all spaces and classrooms and all of the strobe lights were functioning and visible in all locations.

298. In phone conversations with NAVINSGEN staff in April and May 2007, Mr. FACSW-2 said he did not observe any cut wires and it was difficult to determine exactly why the system had stopped working, given its age. He explained the system was of an old design when first installed in the building, which was constructed in the 1970s. He agreed the design is so old and outdated it should be replaced, as it is difficult to obtain replacement parts.

299. Mr. FACSW-2 said he had intended to add a "booster" panel (the SNAC panel mentioned in the work order) to the system, thinking the existing alarm panel was overloaded with alarms that had been added over the years. But while working on the system, he discovered the black wire was carrying positive current and the red wire was carrying negative current, unlike most systems in use today, where the red wire is positive.

300. Mr. FACSW-2 explained that fire alarms are polarity sensitive and will not function if the wiring is reversed. After he realized most of the non-functioning horns were wired backwards (reverse polarity), he was able to use an existing booster panel and simply rewire the alarms to correct their polarity. He said that as he rewired individual alarms, others would begin working, too. He explained that when a large number of horns are wired incorrectly, they increase the load on the alarm panel, causing other horns not to function. Nonetheless, Mr. FACSW-2 considers his work only a temporary fix to keep the existing equipment operating until it can be replaced.

301. Mr. FACSW-1, the local Authority Having Jurisdiction, conducted an inspection of the fire alarm repairs on 9 January 2007. In a 10 January 2007 email, Mr. FACSW-1 reported:

> We walked the building again yesterday (09 Jan 07). The repairs have improved the situation. All existing horn circuits were moved from the fire alarm panel to an existing SNAC panel which had spare capacity. This improved the horn power source reliability. Also, some existing horns were found to be wired backwards (reverse polarity). All horns and strobes are now working and the alarms can now be heard throughout the building. The focus of the IG was that the alarms could not be heard in various portions of the building. To that extent, you can say the repairs are "permanent."
>
> However, the system still has deficiencies compared to present standards:
>
> a) The FACP has no secondary (battery) power supply.
>
> b) The existing strobe devices are inadequate. Either they aren't installed where required (restrooms, lunch room, corridors, etc.), or they aren't bright enough.
>
> c) Some building exits (4-5 total) are not equipped with manual fire alarm stations.

d) The condition of the existing horn and strobe circuits is uncertain. Two circuits were combined into one and another is T-tapped. Although these circuits are working, I cannot guarantee their reliability.

e) The FACP is still antiquated and located in a space that is inaccessible after business hours.

These repairs [to bring the system up to current standards] are not "required" but are strongly recommended. NAVFAC does not require us to upgrade systems to meet present standards unless we are renovating the building.

302. The email goes on to indicate Mr. FACSW-1 observed some evidence of room renovation that did not include alarm system upgrades. He later told NAVINSGEN that when NAVFAC oversees partial renovations, it requires alarm system upgrades, even though the renovation may not be so extensive that the NFPA requires the upgrade. Mr. FACSW-1 also said Mr. FACSW-2 told him he found no evidence of cut wires.

March 2007 Fire Department Inspection

303. On 9 March 2007, Mr. FFD-3 inspected Building 3232 again. His report mentions the need for emergency lights on the 2nd deck and goes on to state: "Need alarm horns installed on 2nd deck, S2-3 conference and two added classrooms."

304. Mr. FFD-3 provided copies of his 7 September 2006 fire prevention inspection that indicates the building needs emergency lights and replacement of the fire alarm system and his 9 March 2007 inspection report that also refers to the need for emergency lights on the 2nd deck and goes on to state: "Need alarm horns installed on 2nd deck, S2-3 conference and two added classrooms."

305. Mr. FFD-3 explained to NAVINSGEN that sometime after Mr. FACSW-1's January 2007 inspection, the Dental Clinic did some remodeling that included creating two new classrooms from an existing open area, but did not add new alarms in those rooms. As a result, Mr. FFD-3 could not hear the alarms from within those rooms during his inspection.

306. A 12 March 2007 email from Mr. FFD-3 to Chief FFD-1 states: ", last Friday ... [I did] a walk-through of building 3232 (Dental) at Naval Station. Two new classrooms and a conference room have been built on the second deck. The area had been open and was served with a single alarm horn. This

single horn can not be heard in the newly constructed rooms and there are no emergency lights installed on the second deck. I noted it on our Prevention Report ...."

307. After NAVINSGEN alerted PWO to the March 2007 fire alarm discrepancies discussed later in this report, LTJG PWO-1 spoke to Mr. FFD-3 about his findings. She received a copy of his discrepancy report and placed a work order request into the system to correct those deficiencies.

308. Mr. PWO-9 provided a 7 May 2007 letter CDR PWO-3 sent to the Naval School of Health Services, the building 3232 tenant who performed this work. It says the spaces where the alarms cannot be heard may not be occupied until an interim control measure, approved by the AHJ, Mr. FACSW-1, is put in place. The letter also indicates the tenant must have additional alarms installed to correct the deficiency. Mr. PWO-9 advises the tenant understands it is responsible for the cost of the alarms as part of the remodeling effort undertaken at its request.

July 2007 Fire Drill

309. On 6 July 2007, Mr. TC-4 emailed NAVINSGEN a copy of a fire drill conducted that morning. No deficiencies were noted on the report. The inspector did make the observation that it was difficult to hear the alarms inside the stairwells. He confirmed these were only comments, not deficiencies. This demonstrates the alarms repaired in November 2006 remain in operation at this time.

Opinions of Navy Subject Matter Experts

Selection of Standards for Allegations One and Two

310. Mr. CNIC-3 is the Director of Navy Fire and Emergency Services, CNIC Operating Forces (Code N3). He assisted NAVINSGEN on another OSC complaint, and NAVINSGEN contacted him at the outset of this investigation for assistance. Before learning of the FFD involvement in this case, Mr. CNIC-3 referred NAVINSGEN to Mr. FAC-2, NAVFAC's Chief Fire Protection Engineer. Although Mr. CNIC-3 is a fire protection expert, NAVFAC is responsible for facilities policy, including design, installation, maintenance and repair of fire alarm systems within the Department of the Navy. Mr. FAC-2 in turn identified Mr. FAC-1, the Senior Safety Engineer at NAVFAC's Norfolk Virginia office, as another fire protection expert who could assist when Mr. FAC-2 was not available.

311. Mr. FAC-2 said an Under Secretary of Defense memo dated 29 May 2002 prescribed the use of the Unified Facilities Criteria (UFC) for all services. As explained on a DoD website (http://www.wbdg.org/references/pa_dod.php):

> The Department of Defense (DoD) and the military services have initiated a program to unify all technical criteria and standards pertaining to planning, design, construction, and operation and maintenance of real property facilities. The objective of the Unified Facilities Criteria (UFC) program is to streamline the military criteria system by eliminating duplication of information, increasing reliance on private-sector standards, and creating a more efficient criteria development and publishing process. Both technical publications and guide specifications are part of the UFC program. Previously, each service had its own publishing system resulting in criteria being disseminated in different formats. UFC documents have a uniform format and are identified by a number such as UFC 1-300-1.

312. Mr. FAC-2 said UFC 3-600-02, "Operations and Maintenance: Inspection, Testing and Maintenance of Fire Protection Systems," dated 1 January 2001, provides the requirements for the maintenance of DoD facilities fire systems.

313. Mr. FAC-2 explained that the UFC refers to, and requires compliance with, NFPA 72, the National Fire Alarm Code. It prescribes the application, installation, location, performance and maintenance of fire alarm systems and their components.

314. Mr. FAC-2 emphasized that NFPA 72, Chapter 10, Section 10.2.1.2, requires that fire alarm system defects and malfunctions be corrected. This section refers to Chapter 4.6, which discusses "impairments." NFPA Annex A defines impairments and is reproduced in Appendix E. Impairments include circumstances where a fire alarm system is rendered inoperable for a variety of reasons, including modification, repair, and testing. The NFPA discussion of impairments is intended to assist building owners in controlling impairments to their building fire alarm systems and ensuring restoration of the systems to full operation.

315. Mr. FAC-2 said NAVFAC takes the position that the NFPA Impairments section requires corrective action when a fire alarm system is: 1) either temporarily under repair; or 2) becomes completely inoperable. Thus, when a system is inoperable, as in the Training Center, the standards in Chapter 4.6 apply.

316. Mr. FAC-2 noted paragraph 4.6.3 uses the term "authority having jurisdiction" (AHJ) and requires that when a system is impaired, mitigating measures must be submitted to and approved by the AHJ. He said UFC 1-3.6 identifies NAVFAC as the AHJ for Navy and explained that for the Training Center, the AHJ is Mr. FACSW-1, the NAVFAC SW Fire Protection Engineer who did the May 2006 study of the Training Center alarm system and who also inspected and approved the repairs in January 2007. Mr. FAC-2 said Mr. FACSW-1 should have been asked to review and approve the interim measures put in place after the first NDN was issued in December 2003. When asked about this requirement, Mr. FACSW-1 told NAVINSGEN that he was not consulted about the interim measures. However, he also indicated he was not aware that the UFC or NFPA required his approval in all cases. When informed that the AHJ had not approved the interim measures, Mr. FAC-2 concluded the Training Center and NBSD had not complied with the requirements of the UFC or NFPA 72.

317. Mr. FAC-1, a Senior Safety Engineer, explained that the UFC and NFPA 72 take precedence over the CFR. He stated the CFR is a general regulation that safety personnel often refer to when inspecting, but it does not preclude using more stringent standards such as those in the UFC. Since the UFC was adopted for all DoD facilities in May 2002, it has become the principle reference for inspecting and repairing fire alarm systems. Mr. FAC-1 agreed that the failure to seek Mr. FACSW-1's approval was a violation of the UFC and NFPA 72.

318. Mr. FAC-1 thought an argument could be made that one complies with 29 CFR 1910.36(b)(7) when one adopts interim warning measures acceptable to the AHJ. However, he also referred to 29 CFR §1910.165, "Employee alarm systems," which requires that if an alarm system is installed in a building, the alarms "shall be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace." Reading these provisions together, Mr. FAC-1 said that while the CFR provides for vocal and visual methods to alert personnel to fire or smoke and those procedures are acceptable as alternate procedures to alert personnel to danger, in this case a fire alarm system was installed but was partially inoperative. Therefore, in accordance with UFC and NFPA, it should have been repaired. While vocal or visual procedures are mitigating measures, the system clearly did not meet the UFC and NFPA standards.

319. Mr. FAC-2 and Mr. FAC-1 also said the procedures adopted by the Training Center were insufficient, but emphasized that

they would have worked with Training Center personnel to find more effective procedures. They suggested, for example, the AHJ might have approved the procedure with a proviso that all instructors be given radios so they could be simultaneously warned of a fire in the building. Another approach would have been to require someone to periodically walk through the building, looking for fires, while classes were in session.[37] They found troubling the thought that people were expected to remain in a building they knew was on fire in order to warn others who could not hear the alarms that they should evacuate.

320. When asked to express an opinion about the procedures put in place by the Training Center, Mr. FACSW-1 said that typically, he would ask an organization to agree to establish a "fire watch" by undertaking an hourly walk of building to look for fires, and to consult with the base fire department for suggestions and concurrence.

321. NAVINSGEN asked the experts to comment on the length of time that interim measures should be allowed to remain in place when a fire alarm system is impaired or otherwise inoperative. They thought 30 days was a reasonable length of time to effect repairs, but indicated that they would consider up to six months reasonable when the necessary repairs are so extensive as to require the organization to fund, prepare, advertise and award a contract for the work. They agreed that the three or four year period during which the Training Center alarm system remained impaired was not reasonable.

322. After he learned of the FFD involvement in this matter, Mr. CNIC-3 read the report and agreed with the assessment of Mr. FAC-2 and Mr. FAC-1. He noted that the fire prevention program does not currently categorize discrepancies found during drills and inspections by severity. He is working on a project for this purpose, and is considering recommending the adoption of the RAC analysis that appears in OPNAVINST 5100.23G. Mr. CNIC-3 also said that at this time there is no mechanism in place to coordinate OSH and fire prevention inspections, but CNIC is exploring that matter.

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[37] Such a resource intensive requirement, which would have fallen on Training Center personnel, might have encouraged a timelier repair of the alarms.

Interpretation of Standard for Allegation Three

323. Evidence developed during this investigation establishes no one filled out the December 2003 or October 2004 NDNs by documenting the interim controls, the abatement plan, the work order number, or the estimated cost of correction on the form, OPNAV 5100/12.[38] In this regard, the archived NAVOSH Tools screenshots are persuasive evidence that neither the NDN form nor the software application ever documented the interim controls or the intended final abatement mechanism. The NAVOSH Program Manual requires use of the NDN form and assigns responsibility for filling out various sections of that form.

324. The NDN form contemplates someone will decide what interim measures or "controls" to implement when a hazard cannot be eliminated immediately and document them on the form. The NDN also has a place to describe the plan of action for final correction of the hazard, the work order number, and the estimated cost of the work. In short, the deficiency notice documents the hazard abatement plan, and paragraph 1202 of the Program Manual allows its use for that purpose. Completing the form and posting it in the work area is important because it informs employees the hazard exists, the degree of risk associated with it, and the actions planned and taken to address the hazard. Incorporating this information into the software application, first NAVOSH Tools, later ESAMS (Enterprise Safety Application Management System), is important because the application report tools provide information to the Commanding Officer responsible for managing the hazard.

325. The underlying controversy between the Training Center and OSH office personnel concerns which organization was responsible to fill out and update the deficiency notice after it was issued by Mr. OSH-1.[39] Since they could not agree, no one did it. A corollary question, who decides what the interim controls and final abatement plan to adopt, was never addressed.

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[38] As previously noted, NAVINSGEN finds the separate SOP Complainant provided to Mr. OSH-1 in late 2004 sufficient to satisfy the requirement to document the interim controls in the October 2004 NDN, since the SOP was in NBSD Site Safety Office files and posted in Training Center classrooms.

[39] A sample of the form used to document NDNs, OPNAV 5100.12, is in Appendix F. An examination reveals that when the instruction says to complete "section B" it is referring to the same part of the form as when it says to "document interim controls," because interim controls are recorded in section B.

326. The Training Center maintains it was not responsible for these actions, especially getting a work order, because it was not responsible for the cost of making repairs. NBSD and region safety personnel and PWO staff insist the "tenant" is responsible for obtaining the work order and filling out the form even if it is no longer responsible for the cost of repairs. They cite past practice for this proposition. Safety personnel at all levels also argue the OSH or Fire Department inspectors would find it too difficult to determine who to give the deficiency notice to if they could not simply leave it with the tenant command's representative.

327. No one suggested referring to the NAVOSH Program Manual, which should resolve this disagreement. But that instruction contains ambiguous and undefined language that can be interpreted to require the landlord, the tenant, or the OSH office to obtain and document information about interim controls and final abatement plans, depending on which sentence in Chapter 12 one reads. This ambiguity extends to the responsibility for obtaining a work order number when the work required arises from a deficiency notice.[40]

328. The Commander, Naval Safety Center, acting in his capacity as the CNO's Special Assistant for Safety, OPNAV Code N09F, is responsible for the OPNAVINST 5100.23 series, and signed OPNAVINST 5100.23G. NAVINSGEN contacted his Safety Liaison Office, OPNAV Code N09FB, with questions about the interpretation of the instruction. At the suggestion of N09FB, NAVINSGEN also sought Mr. FAC-1's interpretation of this instruction, because he took the lead in revisions to Chapter 12 made during the transition from version 23F to 23G. Together, N09FB and Mr. FAC-1 provided the information that follows.

329. One reason for issuing version 23G was to clarify the relationship between region and activity OSH offices and the responsibilities of those offices to the "landlord" and "tenant." Another reason was to clarify responsibilities for interim controls and hazard abatement, given that activities and regions have assumed responsibility for facilities maintenance that previously belonged to facilities occupants.

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[40] Versions 23F and 23G of the OPNAV instruction contain very similar language; most of the changes in 23G are intended to reflect regionalization and the creation of CNIC rather than change the respective duties of the "landlord" and "tenant." These changes also introduce ambiguity, because in some instances it is unclear whether the Region or the Activity must act.

330. Version 23G, paragraph 0304, Regional and Consolidated Safety Organizations, explains that safety services were regionalized to meet the aggregate needs of activities within the same geographic area and to support installation tenants. Regions providing safety services, such as NRSW, and commands receiving them, such as NBSD, are required to establish written agreements such as ISSAs or MOUs that specify the services provided and conditions under which they are provided.

331. NAVINSGEN finds the attempt to address regionalization introduced new ambiguity. For example, pursuant to paragraph 1206 of version 23F, responsibility for hazard abatement clearly rests with "Shore Activity Commanding Officers" such as the NBSD CO, who are the landlords. The same language in version 23G places that responsibility on "Regional Commanders/Shore Activity Commanding Officers" without specifying how to determine which one should act in any particular instance.

332. The foregoing ambiguity notwithstanding, both versions make the OSH office, an agent of the landlord, responsible for documenting the RAC on the notice and for providing a copy to "the official in charge of the operation." The "workplace supervisor," who in most cases will be a tenant employee, is responsible for posting the notice in the area of the hazard until the hazard has been corrected. From that point on, the instruction is confusing.

333. Initially, paragraph 1202b states that "[t]he ***OSH office shall update the posted notice***, as necessary, to accurately reflect the status of the abatement action and the required interim controls." [emphasis added] But later on the same page, the instruction states that:

> The ***official in charge of the operation*** shall take prompt action to correct the hazard and within 30 days of the date of the [NAVOSH deficiency] notice, ***he/she shall complete Section B of the OSH Deficiency notice***[41] and return a copy to the OSH office. ***Regions and/or activities shall implement interim protective measures*** pending permanent abatement ***and list interim corrections on the notice.*** [emphasis added]

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[41] Section B is used to document the status of abatement actions including the interim controls, abatement action, work order number, and estimated cost. So stating that one person completes section B and another person documents the interim controls confuses responsibilities.

334. The NAVOSH Program Manual does not define such terms as "the official in charge of the operation" or "workplace supervisor" and does not state whether region and activity OSH official act as independent inspection officials, as subordinate action officers for region or shore commanders, or both.

335. The language of paragraph 1202b notwithstanding, paragraph 1203, entitled "Interim controls," states:

> ***OSH Offices shall document [interim] controls on the [deficiency] notice*** .... The OSH office shall review and approve interim protective measures in effect for more than 30 days and revise, as appropriate. [emphasis added]

336. Thus, it appears that paragraph 1202 and 1203, which in this respect are virtually identical in 23F and 23G, conflict with each other in specifying who must document the interim controls, which appear in "section B" of the deficiency notice form. Paragraph 1202 requires "the official in charge of the operation" to complete section B and paragraph 1203 requires the OSH office to document the interim controls.

337. Two sentences that were added to the beginning of paragraph 1202 of version 23G may offer some clarification. They state:

> For hazards that are work process-related, the owner of the work process manages hazard abatement. For hazards that are facility-related, the owner of the facility manages hazard abatement.

338. The experts stated the opening sentences of paragraph 1202 in 23G were intended to make clear (not change) the requirement that OSH offices and the "host command" they represent, rather than facility tenants, are responsible for managing hazard abatement in most cases. Recognizing, however, that some hazards are unique to a tenant work process, they included a provision intended to clarify that a tenant is responsible for managing the abatement of hazards created by the tenant's work-processes. Code N09FB gave the example of a tenant who runs a plating shop in a facility owned by a host command such as NBSD. If a hazard relates to the plating process, the tenant remains responsible for hazard abatement. In all other cases, the "owner of the facility" is responsible to manage and abate the hazard. They said a fire alarm system defect is an example of a facility-related hazard the facility owner is responsible to manage and abate through the regional or activity OSH office.

339. The experts could not offer a ready definition for the term "official in charge of the operation" that appears in paragraph 1202(b). They suggested this person should be the tenant if the hazard involves the tenant's work process, and the owner of the facility if it is a "facility related" hazard.

340. The experts were surprised to note the potential for confusion created by the language in paragraphs 1202 and 1203. They suggested that it would be best if the tenant and landlord worked together to establish the interim controls and manner of hazard abatement. They also suggested the instruction might benefit from revision to clarify this issue and that, pending revisions, it would be appropriate to address this matter in the written agreement required by paragraph 0304.

341. In general, however, and with the exception of one sentence making the undefined "official in charge of the operation" responsible for filling out section B of the notice, the language of the instruction indicates the OSH office fills out the notice. While this may be a departure from past practice, it is consistent with the shift in facilities ownership from occupants to activities and regions under CNIC.

342. Given that paragraph 1203 of version 23G starts with a reference to "regions and activities" being responsible for abating hazards, the new language in paragraph 1202 also could be used to reconcile the conflicting language in paragraphs 1202 and 1203. While paragraph 1202 could apply to either work-process or facility-related hazards, paragraph 1203 would apply only in the case of facility-related hazards.

343. Mr. CNIC-6 is the Program Director for Safety and Occupational Health and the Special Assistant to Commander, CNIC for Safety, Code N35. Mr. CNIC-5 is the Deputy Program Director. They provide implementation guidance to regions on safety issues. NAVINSGEN and CNIC IG staff interviewed them about OPNAVINST 5100.23G in June 2007.

344. Mr. CNIC-6 declined to express an opinion on who should complete the deficiency notice. Mr. CNIC-5 said traditionally the tenant has been expected to provide this information. Both emphasized their belief that because the Commanding Officer bears ultimate responsibility for hazard management, the OSH office should not be the organization to select interim controls, document the deficiency notice, or "review" and "approve" interim controls.

345. Given that fire alarms are without doubt "facility-related," NAVINSGEN concludes the Training Center's only duty under the instruction was to post the deficiency notice in Training Center spaces. Likewise, "the official in charge of the operation" of fire alarms would be a landlord representative, and it is most likely that OPNAV intended the landlord be responsible for selecting and implementing the interim controls and final abatement plan. Mr. CNIC-6 and Mr. CNIC-5 make excellent points when they suggest the role of OSH personnel should be limited to inspection and tracking. However, as written, the OPNAV instruction imposes additional duties on them, to include documenting, reviewing, and approving interim controls. The instruction would have to be changed to effect their suggestions, and OPNAV Code N09F might conclude these duties should be performed by OSH personnel.

Discussion and Analysis

346. Based on the Under Secretary of Defense policy memo of 29 May 2002 and the testimony of the subject matter experts, NAVINSGEN finds the appropriate standards are the NAVOSH Program Manual and NFPA 72. The evidence in this case establishes non-compliance with these standards.

Allegation One

347. The experts agreed that while 29 CFR addresses fire protection regulations for general safety purposes, it does not discuss maintenance, certification, impairment or related matters in the level of detail found in NFPA 72. Moreover, the CFR allows the application of more stringent standards such as those provided in the UFC and NFPA 72. The Under Secretary of Defense memo dated 29 May 2002 prescribed the use of the Unified Facilities Criteria (UFC) for the Operations, Maintenance, Inspection, Test, etc. of fire systems, for all services. The UFC, in turn, establishes the National Fire Alarm Code, NFPA 72, as the applicable reference standard.

348. NFPA 72, paragraph 10.2.1.2.2 provides that "[s]ystem defects and malfunctions shall be corrected." The non-functioning fire alarms and strobes were defects and malfunctions that created an "impaired" system within the meaning of the National Fire Code. NFPA 72, paragraph 4.6.3 states that "[w]here required, mitigating measures acceptable to the authority having jurisdiction shall be implemented for the period that the system is impaired."

349. The evidence establishes Mr. FACSW-1 is the cognizant "authority having jurisdiction" for the Training Center but he was not asked to review or approve the Training Center's SOP, and he would not have approved it without some modification, such as the provision of a fire watch. Consequently, allegation one is substantiated on the basis of NFPA 72.

Allegation Two

350. NAVINSGEN also concludes allegation two is substantiated. The alarm system in Building 3232 was not repaired until the commencement of this investigation. Four years is simply too long to wait before taking effective corrective action to get the alarms working again. The only substantive work done to repair the fire alarm system was in July and August 2005, one and one half years after the first NDN was issued, and three years after the initial problem occurred, in the Summer of 2002. But the fire drill Mr. FFD-3 conducted on 25 August 2005 demonstrates those repair efforts were insufficient.

351. Neither NFPA nor the NAVOSH Program Manual establish an absolute time limit in which to correct impairments or deficiencies. While NFPA 72 requires the "system owner or the owner's designated representative" be notified if a defect is not corrected within 24 hours of the conclusion of an inspection, test, or maintenance effort, it does not specify any specific time period for making repairs that return the system to operation or address the defects once "mitigating measures acceptable to the authority having jurisdiction" are in place.

352. Likewise, the NAVOSH Program Manual does not specify a deadline for correcting the deficiency, or say how long interim controls may remain in place before a hazard is abated. It does, however, require the "official in charge of the operation" to "take prompt action to correct the hazard."

353. Consequently, NAVINSGEN must rely on the judgment of the subject matter experts, who believe the alarm system should have been repaired in no more than six months. Even if NAVINSGEN did not agree with the six month time frame, no one reasonably can argue the situation should have been permitted to remain unresolved for four years.

354. In reaching this conclusion, NAVINSGEN considered the impact of the planned base-wide upgrade that would replace the Building 3232 fire alarm system with a new one meeting current code requirements. Mr. FACSW-1 and the fire alarm technicians

thought it would be wasteful to spend money to repair, rather than replace, the alarm system given its age, inherent unreliability, and the difficulty in obtaining replacement parts. Their opinions merit respect and consideration. So ultimately one must ask whether the $9,000 CAPT NBSD-2 spent to effect repairs in November 2006 was wasteful. NAVINSGEN thinks it was not.

355. While it may be reasonable to delay upgrading an existing system for several years in order to do a coordinated base-wide upgrade if that system continues to operate as designed, it is unreasonable to use future projects to justify leaving a RAC 2, or even a RAC 3 fire safety deficiency uncorrected for four years. The $9,000 spent for repairs in November 2006 and the $2,700 CAPT TC-1 spent for the study to replace the system were good business decisions and the right thing to do.

356. An alternative to repairing the alarms would have been to break the Building 3232 work (approximately $100,000 according to Mr. FACSW-1's May 2006 estimate) out of the base-wide upgrade and fund it separately. However, in reality, recognizing today's budget constraints, that $100,000 would have been obtained at the expense of other meritorious projects. This is another reason to conclude it was better to expend the modest funds required to make repairs in this case than to replace the system at the expense of other projects. In this regard, it is notable that the technician who performed the work in November 2006 found the reason the alarms did not work was not because they were broken, unreliable, or needed parts. They were simply underpowered and wired incorrectly.

357. In the absence of any other evidence, NAVINSGEN agrees with the subject-matter experts' opinion that the repair or replacement should have been funded and performed within six months of discovery. But even allowing twice that time, the three or four year delay was unreasonable.

358. In reaching this conclusion, NAVINSGEN does not find unreasonable CDR PWO-4's original decision to defer repairs pending the base-wide upgrade, which she made in November 2004. At that time, she had reason to believe funds would be approved shortly. The problem in this case is that a few months later, when it should have been apparent the funds would not become available in FY 2005, NBSD should have reconsidered the matter. That it did not is in part due to the omissions that result in the substantiation of Allegation Three.

Allegation Three

359. The NAVOSH Program Manual requires identification of interim controls within 30 days if the hazard cannot be corrected immediately. In that case, Section B of the deficiency notice must be completed and returned to the OSH office within 30 days. The instruction also requires the creation of a hazard abatement plan that must be approved by the OSH office if the deficiency cannot be corrected within 30 days. In some cases, the deficiency notice may serve as the hazard abatement plan. In this case, there was no separate document serving as the hazard abatement plan, the December 2003 NDN was never annotated with the interim controls or the abatement plan, and no evidence was produced indicating the October 2004 NDN included them, either.[42]

360. In late 2004, certainly by January 2005 when Mr. OSH-1 changed the RAC from 2 to 3, the OSH Office should have updated the deficiency notice posted in the Training Center to reflect CDR PWO-4's decision that the abatement "project" or "plan" to finally correct the hazard was to completely replace the Building 3232 alarm system as part of the base-wide upgrade. At that point, pursuant to paragraph 1202, the posted deficiency notice should have documented the interim controls and the hazard abatement plan so occupants would know of them. While NAVINSGEN finds posting the SOP alongside the notice was sufficient to satisfy the requirement to document interim controls in the notice (even though the interim controls themselves were not sufficient), there was nothing in either document that identified the plan to finally correct the hazard.

361. Paragraph 1206 of the NAVOSH Program Manual requires Commanding Officers to "maintain a current HA Plan with priorities established for each project listed." It permits the plan to be maintained by the regional OSH office, so long as the "specific activity information (or plan) is readily available." Paragraph 1202 permits the use of "a file of OSH Deficiency Notices, appropriately completed, as the abatement plan." While this may be sufficient, if the information was also recorded in NAVOSH Tools, it then could be used to create reports available to the NBSD Commanding Officer for management of the hazard until final abatement. Otherwise, the OSH Office would have to

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[42] A deficiency notice prepared after the November 2006 repairs does include this information. NAVINSGEN accepts the SOP as documentation of the interim controls for the 2004 NDN, but the abatement plan was not identified.

give the Commanding Officer the individual notices so he could review the hazards for which he was responsible.

362. Having found the testimony of CAPTs NBSD-1 and NBSD-2 credible, NAVINSGEN concludes neither the OSH Office nor the PWO informed them of the inoperable alarms. Thus, they remained accountable for a hazard they did not know of and thus could not effectively manage. The evidence suggests that if they knew of the inoperable alarms, they would have directed they be repaired, notwithstanding the plan to replace them during the base-wide upgrade. Proper documentation of the deficiency notices and/or NAVOSH Tools and ESAMS would have provided a mechanism to inform them. Allegation three is substantiated.

Conclusion

363. Allegation One, that management personnel at NAVOSH Environmental Training Center West, San Diego, CA, and at Naval Base San Diego, CA, failed to implement adequate interim control measures pending repairs to the fire alarm system, as required by NFPA 72, Chapter 4, Paragraph 4.6.3, is substantiated. It should be noted, however, that most safety personnel were not aware of this requirement.

364. Allegation Two, that management personnel at Naval Base San Diego, CA, failed to repair an inaudible fire alarm system in Building 3232, as required by NFPA 72, Chapter 10, Paragraph 10.2.1.2.2 is substantiated. Even though NFPA 72 does not impose any specific time period to make repairs, the evidence established the alarms were inaudible in some classrooms from December 2003, and probably from the Summer of 2002, until repairs were made in November 2006. The elapse of three or four years to effect repairs for a RAC 2 or 3 deficiency in a fire alarm system is unreasonable.

365. Allegation Three, that management personnel at Naval Base San Diego, CA failed to document the interim controls and plan to finally abate the hazard caused by the inoperable alarms and strobes, as required by Chapter 12 of the NAVOSH Program Manual, is substantiated. The requirement to do this is critical to the Commanding Officer's ability to effectively manage hazards.

List of Actual/Apparent Violations

366. Unified Facilities Criteria (UFC), UFC 3-600-02 dated 1 January 2001, Operations and Maintenance: Inspection, Testing and Maintenance of Fire Protection Systems, as implemented by

the National Fire Alarm Code (NFPA 72) Chapter 10, Inspection, Testing and Maintenance, section 10.2.1.2.2 that requires "[s]ystem defects and malfunctions shall be corrected."

367. National Fire Alarm Code (NFPA 72), Chapter 4, Paragraph 4.6.3, that requires the AHJ approve mitigating measures (interim controls) pending correction of impairments.

368. NAVOSH Program Manual, paragraphs 1202 and 1206, which require that interim controls and abatement plans be documented in the deficiency notice and hazard abatement plan.

Collateral NAVOSH Program Manual Issues

369. Information developed during the course of this investigation indicates NBSD, NRSW, and CNIC do not comply with some NAVOSH Program Manual requirements. Several issues merit discussion in this report because they illustrate systemic problems that contributed to the inability of concerned well-meaning people to fix the alarms until a senior naval officer became personally involved.

Relationship of RAC to Interim Controls

370. The first matter concerns selection of the appropriate RAC. The RAC is an important tool because it informs management and employees of the risk associated with a hazard and is used to make hazard management decisions, including abatement priority. Mr. OSH-2 thinks it appropriate to take interim controls into account when setting the RAC, although no language in OPNAVINST 5100.23F or G supports this proposition. The N09FB staff, Mr. FAC-1, and CNIC Safety Personnel said the RAC calculation should be independent of interim controls, which are established later. Minor changes in the NAVOSH Program Manual to clarify this matter would avoid inconsistencies between OSH offices and misleading hazard statistics among regions.

371. NAVINSGEN asked Mr. NRSW-2, Mr. OSH-2's supervisor, about this matter. Although he also thought the initial RAC should be calculated without regard to interim controls, he told NAVINSGEN it is NRSW practice to recalculate the RAC or "re-RAC the hazard" after establishing interim controls in some cases. Mr. NRSW-2 said he has done this himself. He noted that in the Spring of 2007, NRSW had no RAC 1 hazards and only two RAC 2 hazards in the facilities for which it is responsible.

372. Mr. NRSW-2 could cite no language in OPNAVINST 5100.23F or G that supports this practice, nor could he explain precisely how an OSH specialist would document the change in ESAMS, the current hazard tracking tool used by CNIC, NRSW and other regions. It is noteworthy that NAVOSH Tools had a field that NRSW used to reflect a change in the RAC, while ESAMS, which replaced NAVOSH Tools, does not.[43] Notably, it appears Mr. OSH-1 did not communicate the change in the RAC to Training Center personnel, and the RAC in the posted NDN did not change.

373. OPNAV Code N09FB consulted DoD counterparts and learned they do not change the RAC based on interim controls. Mr. FAC-1 thought some Commanding Officers would want to know how interim controls affect the level of risk their personnel are exposed to pending final abatement. Code N09FB said the original RAC must remain visible even in that case.

374. Mr. CNIC-6 and Mr. CNIC-5 expressed some reluctance to "re-RAC" the hazard in the manner reported by Mr. NRSW-2 and said ESAMS did not provide a mechanism to distinguish between the original RAC and a change made after the imposition of interim controls. However, they agreed there was some merit to the suggestion that hazard abatement priority take into account the impact of interim controls, and said CNIC would consider modifying ESAMS to provide this feature.

375. Mr. CNIC-6 and Mr. CNIC-5 said CNIC has some visibility into the RAC levels set by regions through ESAMS. Consequently, the NRSW practice could prove misleading to those who are not aware NRSW is changing the RAC code in ESAMS, especially when there is no mechanism to readily identify changes to the original RAC, and reasons for the changes.

376. In July 2007, NAVINSGEN learned that CNIC has asked the ESAMS contractor to modify the application to include a mechanism for documenting changes in the RAC and the reasons for changes. The contractor has completed this task and says the next step would be for CNIC to announce the new feature by email to the regions. The monthly ESAMS newsletter, available on the ESAMS website, also would announce and discuss this new feature.

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[43] The 2004 NDN Mr. OSH-1 created contains language suggesting it could change after interim controls were set. But there is no evidence Mr. OSH-1 gave a revised copy of the NDN to the Training Center after he lowered the RAC in January 2005, as demonstrated by the NAVOSH Tools entries.

377. NAVINSGEN appreciates the responsiveness of CNIC and the contractor in addressing this matter. However, OPNAVINST 5100.23G, as written, does not authorize changing the RAC once it has been established. Consequently, OSH offices should not change the RAC unless OPNAV Code N09F approves an interim change to the instruction authorizing this practice. In that case, in addition to the ESAMS modifications that apparently already have been made, a mechanism should be developed to ensure all parties who are affected by RAC changes, such as tenant commands and their personnel, are notified and the posted deficiency notice is promptly modified. This is particularly important if the facility will remain in use pending final hazard abatement.

378. If the NRSW practice is implemented in all regions, it is important that OSH personnel be trained to make RAC changes consistently across regions. While NRSW safety personnel think it helpful for concerned personnel to know the effect of interim controls on risk, this practice may have disadvantaged NRSW in the competition with other regions for hazard abatement funds.

Mechanism to Keep Commanding Officers Informed

379. Although the NBSD Commanding Officer is responsible for abatement of hazards, neither CAPT NBSD-1 nor CAPT NBSD-2 knew of the inaudible fire alarms, which were rated a RAC 2 hazard. Moreover, FFD inspection and fire drill results were formally reported only to the Training Center and the investigation indicates NBSD and NRSW have no formal mechanism for reporting FFD findings to Commanding Officers, Public Works Officers, or OSH offices.

380. Paragraph 0207 of OPNAVINST 5100.23G says a safety and occupational health program is an inherent responsibility of command. It requires regions, activities and commands to establish safety counsels and committees "at appropriate command levels" that are chaired by the commanders or their executive officers. In addition, it requires the establishment of a hazard abatement program and a comprehensive self-assessment program. Risk assessment and hazard abatement are included in the program elements subject to the self assessment program.

381. Chapter 4 of OPNAVINST 5100.23F and G is entitled "Councils and Committees." It requires the establishment of safety councils at all Navy regions and activities that provide their own safety support. The councils are chaired by the Region Program Safety Manager or the Activity Commanding or Executive Officer. When the region or activity safety manager

attends routinely scheduled department head or staff meetings, or personally briefs the CO/XO on a recurring basis on safety items, only one formal council meeting is required per year.

382. Chapter 5 of OPNAVINST 5100.23F and G is entitled "Prevention and Control of Workplace Hazards." Version 23G includes a new paragraph 0504J that requires the region or activity safety counsel or the Activity Commanding Officer to review and concur with self assessments and improvement plans. The self assessments must include a review of inspection records and hazard reports. Paragraph 0507 of both versions assigns Commanding Officers responsibility to monitor hazard control on a continuing basis to insure the identification and elimination of hazards, to ensure "the integration of a dynamic hazard control program consistent with operational and safety and occupational health requirements."

383. Despite these enumerated requirements, the inaudible alarms were not reported to the NBSD Commanding Officers.

384. Deciding what needs to be brought to the personal attention of Commanding Officers, and how best to do it, is not always easy and often makes the difference between an average staff officer and an excellent one. The NAVOSH Program Manual could offer more guidance on this matter. For example, while one would expect a Commanding Officer should immediately be informed of every RAC 1 hazard, should RAC 2 hazards also be brought to his attention? What should be done about RAC 3 hazards? Do some types of hazards merit more attention than others, even though they may have the same RAC?

Requirement to Establish Written Agreement

385. This case demonstrates the OSH, PWO, and Training Center had different opinions about their respective roles that could not be resolved by consulting the NAVOSH Program Manual. In this case, no written agreement that might have resolved these different views was available to them. Even if they knew of the 1999 ISSA, which they didn't, the NAVOSH provisions in it provide no assistance in defining their respective rights and responsibilities since it merely says to comply with the NAVOSH Program Manual. In light of this, the CNIC verbal direction that regions and activities no longer execute written agreements for safety services merits attention.

386. As discussed earlier, paragraph 0304 in OPNAVINST 5100.23F and 23G requires ISSAs, MOUs, or other written agreements that

address the provision of safety services between regions and activities, and between activities and tenant commands.

387. Mr. PWO-9 said there was no written agreement between the Training Center and NBSD, but identified an ISSA between NBSD and Navy Medicine West, another Building 3232 tenant. Mr. PWO-9 and Mr. NRSW-2, the Acting NRSW OSH Program Director, also said there was no written agreement between NRSW and NBSD. They said CNIC directed regions not to establish ISSAs or MOUs because under the Base Operations Services (BOS) concept CNIC is establishing, regions provide all safety and building maintenance services and written agreements are unnecessary.

388. OPNAVINST 5100.23G was intended to address the creation of CNIC in 2003. Paragraph 0303, entitled "Organization, Functional Responsibilities, and Staffing Criteria for Shore Safety Organizations," discusses BOS and is reproduced in Appendix G. There is no question that paragraph 0304, which requires written agreements, was written with the expectation that these agreements would exist in the BOS environment.

389. The CNIC IG provided a copy of a 26 April 2004 policy statement signed by Commander CNIC and sent to Regional Commanders. With a subject line of "Navy policy on reimbursement for safety support" the memo states, in part:

> 5. Regional commanders should review existing support agreements to ensure compliance with Navy's Inter-service and Intra-governmental support Agreements program and explore opportunities for reimbursement of safety services. Support agreements should be used to formally document arrangements for supplying and receiving reimbursable support. Such agreements are optional for non-reimbursable support, which may be documented under a Memorandum of Agreement (MOA). Supply and receiving safety services should be specified by the nature and level of support to be provided and included in an MOA between CNI host activity and tenant commands.

390. Despite this direction, regions were slow to take action to address this matter. For example, in January and February 2005, NAVINSGEN conducted an area visit to NRSW. Issue paper 12 of the Area Visit Report addresses the NRSW safety program. Pertinent to this issue, NAVINSGEN made the following finding and recommendation:

> ... Inter-service Support Agreements/Memorandums of Agreement (ISSAs/MOAs) have not been developed for those customers and tenants receiving safety services.
>
> ... CNRSW [should] establish written agreements (ISSA/MOU) with customers of OSH services provided by the region as required by OPNAVINST 5100.23F, Ch. 3.

391. On 21 July 2005, CNIC reported that NRSW would implement ISSAs, stating:

> NRSW is in a process of revising/updating established ISSA's and MOA/Mou's. New ISSA's and MOU/MOA's are being established as needed by the Navy Region Southwest Business Office. Due to the scope of this endeavor, this will take some time.

392. Subsequently, however, CNIC appears to have issued verbal direction that NRSW not execute new ISSAs or MOUs.

393. Mr. CNIC-6 and Mr. CNIC-5 confirmed CNIC has taken the position that regions should no longer enter into the ISSAs or MOUs required by OPNAVINST 5100.23G except when providing services to organizations that reimburse them for services.

394. They explained that CNIC regions provide support to three categories of organizations. First, there are organizations like the FFD and OSH offices involved in this investigation, which are subordinate organizations within the CNIC chain of command. They assert there is no reason to establish an ISSA or MOU with an organization that is part of CNIC.

395. Second, organizations like the Training Center and other NBSD tenants that receive common core services under the BOS program do not have to pay for those services because CNIC itself funds them under the BOS program. Consequently, these organizations don't need an ISSA because they are not transferring funds to CNIC or reimbursing it for the services. In addition, Mr. CNIC-6 and Mr. CNIC-5 said since the regions provide the same common core services to all tenants, there is no need for MOUs or other forms of written agreements with each separate command receiving these services.

396. The third category Mr. CNIC-6 and Mr. CNIC-5 identified includes organizations that do reimburse regions for the support they receive from them. Usually, these are Navy working capital fund organizations that charge for the services they provide to

Navy customers. For this category, they said an ISSA remains appropriate to document the services the region provide the customer and their cost.

397. Mr. CNIC-6 also noted that the Naval Audit Service has issued an audit finding indicating that regions are establishing ISSAs that are unnecessary because no transfer of funds is required for the support being provided.

398. Mr. CNIC-6 acknowledged that CNIC has not requested OPNAV Code N09F waive the NAVOSH Program Manual requirement to execute an ISSA, MOU, or other written agreement. He said that, to date, CNIC has not officially recommended revising the OPNAV instruction to eliminate the requirement, either. However, he reports the instruction is due for revision in 2008 and CNIC has organized a working group to make recommendations for changes to the instruction.

399. By letter of 2 December 2005, the Naval Audit Service (NAVAUDSVC) announced an audit of Navy Installation Support Agreements (ISAs)[44]. For various reasons discussed with CNIC staff during the course of the audit and in the draft audit report issued in March 2007, NAVAUDSVC concluded ISAs are not required for the provision of nonreimbursable services and CNIC could improve the execution, management, and reimbursement collection for ISAs that do address reimbursable services if it stopped executing new ISAs when only nonreimbursable services are involved. The recommendation states:

> Navy host activities to stop executing new ISAs for nonreimbursable services provided. If a written agreement is desired for nonreimbursable services, a memorandum of agreement should be used.

400. CNIC responded to the NAVAUDSVC recommendations by letter of 11 April 2007. In response to the recommendation on ISAs, CNIC stated:

> CNIC Concurs. CNIC draft SA instruction, currently awaiting final approval, directs supplier activities from executing new ISAs for non-reimbursable services and to replace with MOAs. The target date for issuance is October 2007.

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[44] As discussed in the audit report, ISA is a general term that includes several types of support agreements, including ISSAs.

401. In the final audit report, number N2007-0030 dated 1 May 2007, NAVAUDSVC states the planned CNIC actions "satisfy the intent of the recommendation."

402. NRSW provided a copy of "final draft 2" of the CNIC instruction, which appears to have been created in March 2007. The original text directs the use of ISAs where services are provided on a cost reimbursable basis and MOAs when the services are nonreimbursable. However, changes made to the draft at the end of March indicate CNIC may no longer intend to use MOAs for recurring nonreimbursable services such as the safety services addressed in OPNAVINST 5100.23F and G. Instead, the revisions indicate CNIC intends to direct the creation of region or installation level instructions or policy statements in lieu of MOAs or MOUs with individual service recipients.

403. NAVINSGEN asked NAVAUDSVC to review the requirements of paragraph 0304 against the audit findings and recommendations. NAVAUDSVC responded by stating:

> Our audit report addressed an inefficient use of resources when ISAs were executed for strictly non-reimbursable support. Consistent with the DODI 4000.19, the primary support agreement criteria, our recommendation specified using MOAs instead when a written agreement was still desired for non-reimbursable support.

404. Mr. CNIC-6 suggested NAVINSGEN interview the CNIC comptroller for more information on why CNIC believes the audit report supports the conclusion that the written agreements discussed in paragraph 0304 are no longer required. NAVINSGEN interviewed the Comptroller and Deputy Controller. They said the audit report is the reason CNIC will no longer use ISSAs for nonreimbursible services, but could not state that the audit justifies a decision to no longer establish other forms of written agreements for safety services. Like the CNIC Safety organization, however, they thought the CNIC regions provided the same set of common core safety services to all commands and for that reason individual written agreements were unnecessary.

405. NAVINSGEN finds the audit report does not support a CNIC decision to direct that regions and activities providing safety services stop establishing the written agreements required by OPNAVINST 5100.23G. The audit only supports the proposition that MOUs or MOAs, rather than ISSAs, should be used when the safety services are provided on a nonreimbursable basis. Since paragraph 0304 permits the use of MOUs instead of ISSAs and

makes no comment as to when one or the other should be written, NAVINSGEN finds there is no conflict between the audit findings and recommendations and the requirements in paragraph 0304.

406. Code N09FB personnel were not aware of the CNIC position on written agreements. They have not received a request to waive the requirement for written agreements or a proposal to eliminate the requirement. They were skeptical of such a proposal and did not seem inclined to consider it favorably.

407. By email of 11 July 2007, Mr. CNIC-5 told NAVINSGEN that neither he nor Mr. CNIC-6 recall ever telling the regions they should not comply with the requirements of paragraph 0304. He said he discussed this matter with Mr. NRSW-2, and reports that Mr. NRSW-2 "concurs" with his understanding that NRSW will "establish various forms of written agreements with tenant commands receiving common safety services so that Receiver and Supplier know their respective roles and responsibilities."

408. While an argument can be made the region and/or NBSD are in technical compliance with the requirement for a written agreement because one still exists in the Resource Management files, the fact that no one at NBSD, the PWO, or the region and NBSD OSH offices knew of the document renders it useless. In addition, the CNIC Comptroller indicates it no longer accurately reflects services CNIC regions provided and should have been renewed by 2002. Consequently, NAVINSGEN declines to accept the 1999 ISSA as evidence of compliance with paragraph 0304.

409. During this inquiry, NAVINSGEN found no evidence establishing anyone at NRSW or CNIC provided a written order directing NRSW or NBSD not to establish the written agreements required by paragraph 0304 of the NAVOSH Program Manual. NAVINSGEN notes that neither CNIC nor NRSW has the authority to issue such an order, given the requirement in the OPNAV instruction. However, if OPNAV Code N09F believes all the written agreement required by paragraph 0304 need say is that each party will perform the duties set forth in an OPNAV instruction they already have a duty to comply with, then NAVINSGEN agrees with the CNIC view that the requirement for written agreements should be abolished.

410. NAVINSGEN inspections demonstrate regions do not all provide the same safety services. CNIC provides regions the funds sufficient to furnish safety support services required by federal law. Each region then must decide whether, and to what extent, it will provide safety services specified by Navy policy

but not required by federal law. The regions provide different mixes of these safety services. If a service recipient tenant wants more services than a region is willing to provide on a nonreimbursable basis, some regions will provide those services on a reimbursable basis.

411. As an example of the variation in region practice, CDR TC-2 advises NAVINSGEN that while NRSW provides OSH support services to the Training Center at NBSD, Navy Region Mid-Atlantic does not provide safety support services to the Norfolk facility in which his own office is located.

Actions Planned or Taken

412. After learning of the defective alarm system in October 2006, CAPT NBSD-2 directed the PWO to brief him on possible solutions to remedy the problem without having to wait on future approval of the base-wide fire alarm project. When he learned the repairs might be accomplished for about $10,000, he authorized them, and they were successfully performed in November 2006. The system was tested by the AHJ in January 2007, who found the repairs were adequate to restore the system to operating condition. The July 2007 FFD inspection confirms the alarms still operate properly.

413. On 12 February 2007, the Deputy Assistant Secretary of the Navy for Installations and Facilities approved the base-wide upgrade project, at an estimated cost of $7.4 million. On 28 June 2007, NAVFAC SW awarded a $5,778,632 contract for the base-wide alarm system upgrade, which includes replacing the outdated alarm system in Building 3232, to Halbert Construction Company of El Cajon, California. The award letter specifies the contract completion date is to be no later than 13 November 2008. CDR PWO-3 says Building 3232 will receive priority in the order of work to be performed.

414. CDR TC-2, the NAVOSH Training Center CO, reviewed Complainant's concerns about hazardous material training, labeling, storage and training, with Mr. TC-5 and Mr. TC-4 while visiting NBSD in April 2007. They concluded all issues other than paint storage already had been addressed. Although they believe the paint in the building was stored in accordance with applicable regulations, CDR TC-2 directed that the painting projects be completed and any remaining paint be removed from the building as soon as possible. In June 2007, CDR TC-2 advised the paint has been removed.

415. CDR TC-2 consulted with Mr. FAC-1 about the need to revise training programs his command offers to reflect the findings of this investigation concerning the National Fire Code, to include the role of the AHJ, and the provisions of the NAVOSH Program Manual. They identified an appropriate course for this training and are in the process of determining whether the information provided about the AHJ needs to be expanded or clarified.

416. At NAVINSGEN's request, Mr. FAC-1, Chief FFD-1, and Mr. OSH-2 looked at the need for Building 3232 emergency lighting in May 2007. They agreed applicable standards require their installation. Mr. PWO-9 reports receipt of contractor proposals to perform this work; negotiations are in progress and he hopes the work can be completed by the end of July.

417. Mr. CNIC-3 and his Deputy, Mr. CNIC-1, have established working groups to examine issues relating to FFD services including the possibility of establishing a RAC system for the deficiencies noted during FFD inspections and drills. They are also examining how the FFD and OSH offices might better coordinate the results of their inspections and communicate them to those who must act on them. NAVINSGEN notes that ESAMS does have a fire protection module that could be used to inform OSH and PWO personnel of FFD findings that may be of concern to them.

418. Mr. CNIC-6 says CNIC has established a working team to review and recommend changes in OPNAVINST 5100.23G, which OPNAV Code N09F has scheduled for revision in 2008.

419. NAVINSGEN asked Complainant to read a draft report in July 2007. She did not offer more facts or identify other witnesses.

Personnel Actions Taken

420. This investigative report was submitted to the Commanding Officers of the Training Center and NBSD for their accountability determinations.

421. CDR TC-2, the Training Center CO, advises he concluded no disciplinary action is appropriate because the report presents no evidence of misconduct or negligence by Training Center personnel. None of his subordinates were aware of the requirement to have the AHJ review and approve interim controls because fire code provisions are not taught in the OSH program.

422. CAPT NBSD-2, the NBSD CO, also advises he decided no disciplinary action is appropriate. He stated, in part:

I have determined...that there was no ill will or deliberate neglect on the part of anyone at NBSD (everyone wanted to get the problem solved), and that no disciplinary or adverse action is warranted against personnel under my jurisdiction.... Most of the key personnel who worked the fire alarm issue at NBSD are civilian employees. They are trusted and hard working. Each has cooperated fully in the investigation and helped bring to light the numerous organizational, coordination and process issues that have played a part in the unacceptable delay involved in correcting the fire alarm issue. The investigation has been helpful in shining light on those areas where processes and procedures should be changed and organizational improvements made. Under DON rules, discipline (for civilians) is "not punitive; it should serve as a deterrent to unacceptable conduct or behavior...." To the extent that I have authority to administer discipline over personnel who are employed at my command and who were involved with the fire alarm issue at Building 3232, for the reasons stated above, I have determined not to impose discipline on any personnel.

Observations and Recommendations

Observations

423. Taking four years to correct RAC 2 or 3 deficiencies in a fire alarm system is unacceptable. But for this investigation, repairs may not yet have been made.

424. NRSW and NBSD Safety and Public Works organizations should have been more proactive in identifying a mechanism to restore the inaudible fire alarms to operating condition once they learned the base-wide upgrade would not be funded in FY05. This is especially noteworthy given that when the NBSD Commanding Officer became involved, repairs were accomplished quickly for less than $10,000. The evidence and the opinions of subject matter experts indicate repairs should have been made no later than the Spring or Summer of 2005.

425. NAVINSGEN does not find persuasive arguments that the Training Center did not take sufficient action to obtain a corrective work order from the PWO. The evidence establishes reasonable efforts were made, without success. Equally unpersuasive are suggestions that PWO personnel reasonably might have thought repairs had been made. Under the circumstances, they should have contacted the Training Center, the OSH office,

or the FFD to confirm repairs were effective, given that the NBSD Commanding Officer was responsible to make those repairs.

426. This critique must be tempered with the observation of one Fire Department Inspector. Building 3232 is a non-combustible two story structure with outside stairs to facilitate exit should a fire occur. It is used primarily during daylight hours for classes and is not a flammable wooden barracks that people sleep in overnight. Any fire that might start in one part of the building likely would consume all combustible materials and extinguish itself before spreading to other parts of the building. Nonetheless, the CNIC investigator's observation that it is fortunate the SOP never had to be tested is the best one can say in light of the failure to take effective action to repair the alarm system.

427. NAVINSGEN finds the failure to act with reasonable dispatch is not due to ill will or deliberate neglect. The email record demonstrates key Training Center, OSH, FFD and NBSD personnel wanted to get this problem resolved. Their inability to accomplish that objective, given the system in which they were working, led to mounting frustration that was evident during witness interviews. Reasons for the lack of effective action include confusion over responsibility and coordination requirements in a changing environment caused by the DON regionalization program; miscommunication over desired outcomes (repair or replacement); misunderstanding about who was going to take action; and perhaps a simple shortage of personnel and other resources available to accomplish work.

428. Although NAVINSGEN finds no individual culpable for the failure to fix the alarm system and clear the deficiency in a reasonable time, this case raises significant systemic issues that must be addressed.

429. The NAVOSH Program Manual contains conflicting and ambiguous provisions that hinder a clear understanding of who is responsible to take the actions it requires. To the extent the Program Manual changes past practice, there appears to be no effective training program to communicate those changes. The failure to distinguish between region and shore activity responsibilities in version 23G only complicates these problems.

430. Two inspection processes, NAVOSH and Fire Protection, examine the same facilities for similar purposes, but the results of these inspections are not communicated, consolidated, and effectively coordinated. Certainly, there was no evidence

of coordination in this investigation. FFD and OSH Office files did not contain copies of each other's inspection reports.

431. If there is a central coordination point, it appears to be the PWO or PWC, both of which now are part of NAVFAC SW. The evidence establishes the problem was reported to those organizations many times throughout the four years the hazard remained unabated. Yet they did not resolve it. The proposition that the tenant command should be required to contact the TL Officer to correct hazards identified in OSH deficiency notices is questionable because the Tenant Command has no responsibility to effect those repairs and this case demonstrates that approach does not produce acceptable results. Moreover, given the transfer of facilities to the region or activity, the concept no longer makes sense. FFD and OSH office personnel should work directly with a representative of the Region Commander or Shore Activity Commanding Officer responsible for managing and abating the hazard. While the Public Works Officer could serve as their representative, a better solution might be to identify a representative who reports directly to the Region Commander or Shore Activity Commanding Officer, rather than to NAVFAC.

432. Lack of knowledge and coordination is also evident from the fact that few people knew of the relationship between the NAVOSH and Fire Protection programs, as illustrated by the failure of OSH personnel to consult the NFPA for the requirement to repair the fire alarms or to seek the approval of the Authority Having Jurisdiction. The lack of effective coordination of the two programs also is notable given the fact that Chief FFD-1 and Mr. FFD-3 knew exactly who the AHJ was for NBSD and understood the functions he performs.

433. The lack of effective coordination and information exchange between Base and Region Level Safety, Public Works, and Fire Protection organizations also is evidenced by the FFD inspections of Building 3232 that found an additional deficiency, lack of emergency lighting, not reported in the NAVOSH inspections or Mr. FACSW-1's engineering study.

434. The apparent lack of coordination is even more remarkable given that people in both organizations seem to know who their counterparts are and occasionally talked with each other about the fire alarm problem. What they don't appear to share with each other is knowledge of their respective rules, requirements, and procedures. Certainly, the NAVOSH community at NBSD and

within NRSW does not appear to understand the impact NFPA fire protection standards may have on NAVOSH programs.

435. OSH personnel in NRSW have adopted hazard rating practices that are not authorized by the NAVOSH Program Manual or known to N09FB and CNIC safety personnel. Mr. OSH-2 was the only person interviewed during this investigation who said it was appropriate to consider interim controls in establishing the "original" RAC. However, Mr. OSH-1, Mr. OSH-2, and Mr. NRSW-2 each stated it is the practice within NRSW to "re-RAC" a hazard after interim controls are established. The evidence establishes Mr. OSH-1 did that in January 2005 and NAVOSH Tools provided a mechanism for recording the change without destroying the evidence of the original RAC. NAVINSGEN does not express an opinion on the appropriateness of this practice, which should be addressed by OPNAV Code N090F with the assistance of CNIC.

436. The failure to inform CAPTs NBSD-1 and NBSD-2 of the inoperable alarms is the greatest cause for concern in this case. They were accountable for a hazard they did not even recognize. The Commanding Officer must rely on the judgment of his subordinates to inform him of matters he must address without overwhelming him with unnecessary data. Sorting the essential from the trivial is not always easy, and in this case the NAVOSH Program Manual offers little guidance.

437. This has been a long and time consuming investigation. NAVINSGEN appreciates the assistance and patience of all involved. Mr. PWO-9 deserves special mention for answering endless questions and providing helpful documentation. The NRSW investigator, who had no formal role in this investigation, also went out of his way to provide valuable support. Chief FFD-1's persistent attempts to get someone's attention and his documentation of those efforts is noted and appreciated. Training Center personnel - Mr. TC-5, Mr. TC-4, and Complainant - are commended for the grace they showed while teaching safety in classrooms with non-functional fire alarms.

Recommendations

438. NAVFAC SW should request the base-wide upgrade contractor replace the alarms in Building 3232 as close to the beginning of the replacement work as reasonably possible.

439. NBSD and NAVFAC SW should coordinate remodeling projects in NBSD facilities to ensure safety requirements, such as fire

alarm placement, are adequately addressed and establish a process for this purpose.

440. NBSD should designate someone, such as the concerned TL Officer, to receive copies of, and coordinate action on, all FFD and OSH inspections that document hazards or impairments in facilities for which NBSD bears maintenance and repair responsibility. OSH and FFD inspectors should routinely provide copies of their reports to this person and give them access to information in ESAMS. If the NBSD representative is not in the PWO, the TL Officer for the facility concerned also should have access to the ESAMS data for the deficiency.

441. FFD and OSH inspectors should provide Building Monitors or other designated representatives of tenant commands copies of their reports and access to information in ESAMS concerning these matters in order that tenant command personnel also may track them until they are closed out.

442. Pending clarification from higher authority, NRSW and NBSD should issue a memo explaining who must take the action on each item described in OPNAVINST 5100.23G, Chapter 12. In particular, the memo should state who is responsible for deciding what interim controls and abatement plans to implement, who must document that information on the posted deficiency notice, who must place the information into ESAMS, and who will have access to the information.

443. Based on the NRSW and NBSD decisions about OPNAVINST 5100.23G, Chapter 12 responsibilities, NRSW and the Training Center should execute a written agreement for the provision of safety services.

444. The NRSW Commander and NBSD Commanding Officer should tell OSH and FFD personnel who inspect their facilities what they want reported to them concerning the hazards they identify.

445. NRSW, NAVFAC SW, and NBSD should review and fix the work order process. Building Monitors should be given access to work orders created in MAXIMO so they may track progress on matters of concern to them. Building Monitors should have the ability to search MAXIMO so they can identify work orders entered into the system that apply to their facilities. Consider whether Building Monitors should have the ability to enter work order requests directly into the system.

446. Within 30 days of receipt of this report, CNIC should decide whether it objects to the execution of written agreements describing the provision of safety services required by OPNAVINST 5100.23G, paragraph 0304. If it does object, then, within 45 days of receipt of this report, CNIC should make a written request that OPNAV Code N09F waive the requirement. If it decides not to request a waiver, CNIC should inform all regions, in writing, to immediately resume establishing and updating written agreements for safety services within 45 days of receipt of this report.

447. Within 30 days of receipt of this report, CNIC should decide whether it is appropriate to modify the RAC after interim controls are established. If it determines this action is appropriate then, within 45 days of receipt of this report, CNIC should inform OPNAV Code N09F of its position and request concurrence. Should Code N09F concur with adopting this practice, CNIC should ensure the appropriate mechanism is in place to track both the original RAC and subsequent changes and that regions are informed of the capability, and the purpose for which it should be used. In that case, Code N09F should revise the NAVOSH Program Manual to reflect this process.

448. CNIC IG should determine why Navy Region Mid-Atlantic does not provide safety support services to the NAVOSH Environmental Training facility in Norfolk.

449. CNIC should review the provision of safety support services and the written agreements that describe them across all regions.

450. OPNAV Code N09F should review this report and consider clarifying the language in the NAVOSH Program Manual to address identified problems. For example, definitions of such terms as "official in charge of the operation" might be helpful. Consider reconciling conflicting provisions, such as those stating who should document interim controls and abatement plans. Minor clarifications, such as stating whether interim controls should be considered when establishing the original RAC, would be helpful.

451. OPNAV Code N09F should decide whether the written agreements required by OPNAVINST 5100.23G, paragraph 0304 are necessary given regionalization and the transfer of most responsibility for safety services to the regions and shore activities. If necessary, Code N09F should provide more guidance on the contents of the agreements. As noted in this

report, if the only thing the document need do is state the parties will comply with the NAVOSH Program Manual, written agreements are unnecessary.

452. In view of the potential danger that fire or similar hazards present, NRSW should coordinate a review of proposed or contemplated projects within its jurisdiction containing RAC 1, 2 and 3 safety issues and examine their status for similar occurrences such as those found in this investigation. If a RAC 1-3 exists and funding is not available within 6 months to address the issue, consider alternative solutions or temporary fixes to avoid exposing personnel to significant hazards. If no solutions are identified to resolve the issue within six months, elevate the matter to CNIC for action. Because the concept of "re-RACing" does not appear to be known to or condoned by CNIC or N09FB, and is not sanctioned by the NAVOSH Program Manual, this review should be based on the original RAC.

453. OPNAV Code N09F, CNIC, and NAVFAC should revise NAVOSH and Fire Department inspection programs to improve communication, information exchange, and coordination of actions among all affected organizations.

454. NBSD, working with NAVFAC SW and NRSW, should review and revise the coordination, communication and standardization of inspection reporting requirements between building and safety inspectors for: NBSD; NAVFAC SW; Public Works Departments; the Resident Officer in Charge of Construction; FFD; and Safety and Occupational Health Program managers to ensure a standardized and coordinated inspection reporting effort.

455. NBSD, working with NAVFAC SW and NRSW, should review the standards used for NAVOSH and Fire Department inspections that are looking at the same facilities for consistency. The failure of the NAVOSH inspections to report the absence of emergency lighting in Building 3232, a matter of concern to the FFD inspectors, was a situation that should not have occurred.

456. The NAVOSH Training Center should determine whether to revise its training programs to address the relationship of the National Fire Protection Code to NAVOSH fire safety inspections, with particular regard to the role of the AHJ.

457. CNO N09F, CNIC, NAVFAC and NRSW should identify and promulgate "lessons learned" from this investigation so that safety concerns and potential safety violations can be more

effectively and expeditiously addressed and resolved or corrected.

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Appendix A - Reference Documents

1. NAVINSGEN ltr re 20060850/DI-06-1731 dated 5 Oct 2006
2. BUMED ltr re 20060460 dated 2 OCT 2006
3. OPNAVINST 5100.23F and 23G, NAVOSH Program Manual
4. Unified Facilities Criteria (UFC) 3-600-02, "Operations and Maintenance: Inspection, Testing and Maintenance of Fire Protection Systems," dated 1 January 2001.
5. Under Secretary of Defense memo dated 29 May 2002, directing DoD Components to use Unified Facilities Criteria (UFC).
6. National Fire Alarm Code (NFPA), Chapters 4 and 10.
7. Code of Federal Regulation, 29 CFR §§1910.36 and 1910.165.
8. Draft 1998 Training Center/NBSD ISSA
9. NBSD 22 Sep 1998 letter sending draft Training Center ISSA
10. 1999 Training Center/NRSW ISSA
11. NRSW 21 Jun 2000 letter approving move to Building 3232
12. Training Center 7 Sep 2000 letter to NRSW re ISSA
13. FFD Fire Drill Report of 7 July 2003
14. FFD emails, July 2003
15. NAVOSH Deficiency Notice NS4089 dated 16 Dec 2003
16. NAVOSH Tools screenshots for NDN NS4089
17. FFD Fire Drill Report of 23 Aug 2004
18. FFD email of 24 Aug 2004 (FFD-1 to PWC-2)
19. Deficiency Report FKSJK, 31 Aug 2004 (PWC-3)
20. NAVOSH Deficiency Notice NS7927 dated 25 Oct 2004
21. NAVOSH Tools screenshots for NDN NS7927
22. OSH Office and Training Center emails Nov-Dec 2004 and May 2006 (OSH-1, Haddon, OSH-2, TC-5)
23. Notice of fire SOP posted in Building 3232
24. Selected minutes of 2005 Training Center staff meetings
25. Training Center (Haddon, TC-3), FFD (FFD-1) and PWO (PWO-8) emails, May 2005
26. Training Center (TC-3), FFD (FFD-1) and PWO (PWO-6) emails, July 2005
27. Work Request M6WMC dated 19 Jul 2005
28. Diagram of Training Center space in Building 3232 showing smoke detector installation
29. FFD Fire Drill Report, 25 Aug 2005 (FFD-3)

30. NAVFAC SW Email Re engineering study request and related E-Project documents
31. Mr. FACSW-1's fire alarm system analysis (study) at Building 3232, May 2006 and October 2006 (modified cost)
32. NBSD CO email 5 SEP 06 re NBSD fire alarm systems
33. FFD Inspection Report (FFD-3), 7 Sep 2007
34. NBSD CO msg 261310Z SEP 06 re NBSD fire alarm systems
35. Work Order VLHFX dated 26 Oct 2006
36. FACSW-1 email, 10 Jan 2007 (alarm system ok)
37. DASN 12 Feb 07 funding approval letter
38. FFD Inspection Report, 9 Mar 07 (FFD-3)
39. FFD email (FFD-3 to FFD-1), 12 Mar 07
40. NBSD 7 May 2007 letter to NSHS re need for more fire alarms in second floor remodeled spaces
41. NAVFAC SW 28 Jun 2007 base-wide alarm upgrade award letter
42. FFD Inspection Report, 6 Jul 07 (FFD-2)

Appendix B - Witness List

NAVOSH Training Center

1. Ms. Krista Haddon, OSH Safety Specialist
2. Captain TC-1, USN, former Commanding Officer
3. CDR TC-2, USN, Commanding Officer
4. CDR TC-3, former Executive Officer
5. Mr. TC-4, Facilities Manager
6. Mr. TC-5, Executive Director

Naval Base San Diego

7. CAPT NBSD-1, (Ret), former Commanding Officer
8. CAPT NBSD-2, Commanding Officer

Public Works Office

9. LT LTJG PWO-1, Tenant Liaison Officer
10. LT PWO-2, former Tenant Liaison Officer
11. CDR PWO-3, NBSD Public Works Officer
12. CDR PWO-4, former NBSD Public Works Officer
13. CDR PWO-5, former NBSD Public Works Officer
14. Mr. PWO-6, PWO Maintenance Control Director
15. Mr. PWO-7, Tenant Liaison Officer
16. LT PWO-8, former Tenant Liaison Officer
17. Mr. PWO-9, Deputy NBSD Public Works Officer

Public Works Center Recurring Maintenance Shop

18. Mr. PWC-1, Shop Foreman
19. Mr. PWC-2, former Shop Foreman
20. Mr. PWC-3, Fire Alarm Technician

NBSD OSH Office

21. Mr. OSH-1, Safety Specialist (now at NAVFAC SW)
22. Mr. OSH-2, NBSD Site Safety Manager

San Diego Metro Area Federal Fire Department

23. Chief FFD-1, Assistant Fire Chief
24. Mr. FFD-2, Inspector
25. Mr. FFD-3, Inspector

Suitable for Public Release (names removed)

Navy Region SouthWest

26. Ms. NRSW-1, Support Agreement Manager
27. Mr. NRSW-2, Acting NRSW OSH Program Director

NAVFAC SW

28. Mr. FACSW-1, NAVFAC SW Senior Fire Protection Engineer
29. Mr. FACSW-2, NAVFAC SW fire alarm technician
30. Ms FACSW-3, NAVFAC SW Team Leader

CNIC

31. Mr. CNIC-1, Deputy Director, Navy Fire & Emergency Services Division
32. Ms. CNIC-2, Comptroller
33. Mr. CNIC-3, Director, Navy Fire & Emergency Services Division
34. Mr. CNIC-4, Deputy Comptroller and Principal Financial Advisor
35. Mr. CNIC-5, Deputy Program Director for Safety and Occupational Health
36. Mr. CNIC-6, Program Director for Safety and Occupational Health and Special Asst to Commander, CNIC

NAVFAC

37. Mr. FAC-1, NAVFAC Senior Safety Engineer
38. Mr. FAC-2, NAVFAC Chief Fire Protection Engineer

OPNAV Code N09F

39. CDR N09F-1, OPNAV Safety Liaison
40. Ms. N09F-2, OPNAV Safety Liaison
41. CAPT N09F-3, Director, OPNAV Safety Liaison Staff

Appendix C - Selected Code of Federal Regulations Provisions

29 CFR Section 1910.36(a) - Application. This subpart contains general fundamental requirements essential to providing a safe means of egress from fire and like emergencies. Nothing in this subpart shall be construed to prohibit a better type of building construction, more exits, or otherwise safer conditions than the minimum requirements specified in this subpart. Exits from vehicles, vessels, or other mobile structures are not covered by this subpart.

Section 1910.36(b) -- Fundamental Requirements

1910.36(b)(1) -- Every building or structure, new or old, designed for human occupancy shall be provided with exits sufficient to permit the prompt escape of occupants in case of fire or other emergency. The design of exits and other safeguards shall be such that reliance for safety to life in case of fire or other emergency will not depend solely on any single safeguard; additional safeguards shall be provided for life safety in case any single safeguard is ineffective due to some human or mechanical failure.

1910.36(b)(2) -- Every building or structure shall be so constructed, arranged, equipped, maintained, and operated as to avoid undue danger to the lives and safety of its occupants from fire, smoke, fumes, or resulting panic during the period of time reasonably necessary for escape from the building or structure in case of fire or other emergency.

1910.36(b)(7) -- In every building or structure of such size, arrangement, or occupancy that a fire may not itself provide adequate warning to occupants, fire alarm facilities shall be provided where necessary to warn occupants of the existence of fire so that they may escape, or to facilitate the orderly conduct of fire exit drills.

1910.36(b)(9) -- Compliance with this subpart shall not be construed as eliminating or reducing the necessity for other provisions for safety of persons using a structure under normal occupancy conditions, nor shall any provision of the subpart be construed as requiring or permitting any condition that may be hazardous under normal occupancy conditions.

1910.165(a), Scope and application.

1910.165(a)(2) -- The requirements in this section that pertain to maintenance, testing and inspection shall apply to all local fire alarm signaling systems used for alerting employees regardless of the other functions of the system.

1910.165(b), General requirements.

1910.165(b)(1). The employee alarm system shall provide warning for necessary emergency action as called for in the emergency action plan, or for reaction time for safe escape of employees from the workplace or the immediate work area, or both.

1910.165(b)(2). The employee alarm shall be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace. Tactile devices may be used to alert those employees who would not otherwise be able to recognize the audible or visual alarm.

Appendix D - Selected Unified Facilities Criteria Provisions

This statement is at: http://www.wbdg.org/references/pa_dod.php

> The Department of Defense (DoD) and the military services have initiated a program to unify all technical criteria and standards pertaining to planning, design, construction, and operation and maintenance of real property facilities. The objective of the Unified Facilities Criteria (UFC) program is to streamline the military criteria system by eliminating duplication of information, increasing reliance on private-sector standards, and creating a more efficient criteria development and publishing process. Both technical publications and guide specifications are part of the UFC program. Previously, each service had its own publishing system resulting in criteria being disseminated in different formats. UFC documents have a uniform format and are identified by a number such as UFC 1-300-1.

Selected provisions from UFC 3-600-01, Fire Protection Engineering for Facilities

Paragraph 1-1. Scope

This UFC establishes fire protection engineering policy and criteria for Department of Defense (DOD) components. The provisions of this UFC are applicable to all new and existing (emphasis added) DOD facilities located on or outside of DOD installations, whether acquired or leased, by appropriated or non-appropriated funds, or third party financed and constructed. Facilities covered by this document include all types of buildings and their contents (emphasis added), structures, whether considered temporary or permanent, mobile and stationary equipment, waterfront facilities, outside storage, and shore protection for ships and aircraft. Matters relating to fire department operations, staffing, and equipment are not covered by this UFC.

Paragraph 1-2. Purpose

The purpose of this UFC is to establish minimum protection requirements for DOD facilities. These criteria are based on commercial requirements set forth by national insurance underwriters and may exceed minimum national code requirements. The requirements in this UFC reflect the need for the protection of life, mission, and property (building or contents) while taking into account the costs of implementing the criterion and

risks associated with the facility. These criteria have been established in the best interest of DOD.

Paragraph 1-3.6. Authority Having Jurisdiction (AHJ)

The term "AHJ" as used in the codes and standards referenced in this UFC must mean the component office of responsibility, i.e., U.S. Army, HQ USACE/CECW-CE; U.S. Navy, NAVFACENGCOM HQ Code CHE; U.S. Marine Corps, HQMC Code LFF-1; U.S. Air Force, HQ AFCESA/CES; Defense Logistics Agency (DLA), DES-SE; National Geospatial-Intelligence Agency (NGA), Security and Installations; and all other DOD components, Deputy Under Secretary of Defense for Installations via the DOD Committee on Fire Protection Engineering.

Selected Provisions from UFC 3-600-02, Inspection, Testing, and Maintenance of Fire Protection systems:

Paragraph 1-2. PURPOSE AND SCOPE

This UFC provides requirements for inspection, test, and maintenance (ITM) of engineered fire protection features in Department of Defense (DoD) facilities. Do not deviate from these criteria without prior approval of the component office of responsibility: U.S. Army, HQ USACE/CEMP-E; U.S. Navy, NAVFACENGCOM HQ - CHENG; U.S. Marine Corps, HQMC Code LFF-1; U.S. Air Force, HQ AFCESA/CES; Defense Logistics Agency, HQ DLA-D through DLSC-BIS; National Imagery and Mapping Agency, NIMA/MSF; and all other DOD components, Office of the Deputy Under Secretary of Defense (Installations) via the DOD Committee on Fire Protection Engineering. Do not use this UFC for acceptance or commissioning of fire protection systems.

Appendix E - Selected National Fire Alarm Code Provisions

Chapter 10, Inspection, Testing and Maintenance

10.2.1.2 Impairments.

10.2.1.2.1 The requirements of Section 4.6 shall be applicable when a system is impaired.

10.2.1.2.2 System defects and malfunctions shall be corrected.

10.2.1.2.3 If a defect or malfunction is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner's designated representative shall be informed of the impairment in writing within 24 hours.

Chapter 4, Fundamentals of Fire Alarm systems

4.1 Application.

4.1.1 The basic functions of a complete fire alarm system shall comply with the requirements of this chapter.

4.6 Impairments.

4.6.1 The system owner or their designated representative shall be notified when a fire alarm system or part thereof is impaired. Impairments to systems shall include out-of-service events.

4.6.2 A record shall be maintained by the system owner or designated representative for a period of 1 year from the date the impairment is corrected.

4.6.3 Where required, mitigating measures acceptable to the authority having jurisdiction shall be implemented for the period that the system is impaired.[45]

4.6.4 The system owner or owner's designated representative shall be notified when an impairment period is completed or discontinued.

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[45] UFC 3-600-01 26 September 2006, 1-3.6 Authority Having Jurisdiction (AHJ), states: "The term 'AHJ' as used in the codes and standards referenced in this UFC mean the component office of responsibility, i.e., ... U.S. Navy, NAVFACENGCOM HQ Code CHE; and all other DOD components, Deputy Under Secretary of Defense for Installations via the DOD Committee on Fire Protection Engineering.

NFPA Annex A defines impairments as:

> A.4.6 The term impairments encompasses a broad range of circumstances wherein a fire alarm system or portion thereof is taken out of service for a variety of reasons. Fire alarm systems are routinely impaired in order to perform hot work (e.g., open flame operations) in areas with automatic detection, construction, painting, etc., as well as to conduct normal fire alarm system maintenance and testing. Impairments can be limited to specific initiating devices and/or functions (e.g., disconnecting the supervising station connection during system testing), or they can involve taking entire systems or portions of systems out of service. This section is intended to help building owners control impairments of the fire alarm system(s) in their building(s) and to ensure that systems are restored to full operation and/or returned to service afterward.

Appendix F - Selected OPNAV 5100.23F Provisions

OPNAV INSTRUCTION 5100.23F dtd 15 Jul 02

Subj: NAVY OCCUPATIONAL SAFETY AND HEALTH (NAVOSH) PROGRAM MANUAL

0101. References
Throughout the manual, references applicable to each chapter appear at the end of the chapter.

0105. Applicability

a. The provisions of this manual apply to all Navy civilian and military personnel and operations worldwide except where responsibility rests with the Commandant of the Marine Corps (CMC), and for those afloat personnel falling under the requirements of reference 1-4. Exceptions also include military-unique equipment, systems and operations; conditions governed by other statutory authorities or interservice support agreements; and conditions governed by international agreements overseas.

0205. Policy Formulation and Implementation

b. Implementation. Because safety is an inherent responsibility of command, activities shall implement all aspects of the Navy Safety and NAVOSH programs through the chain of command. Echelon Two commanders are responsible for ensuring that the commanders, commanding officers, directors, officers in charge and supervisors at their activities:

(1) Conduct an aggressive mishap prevention program.
(2) Assign safety and health responsibilities to qualified personnel.

0303. Organization, Functional Responsibilities, and Staffing Criteria for Shore Activity OSH Organizations

a. Organization. Each shore activity shall have an OSH organization, staffed and organized commensurate with the mission and functions of the command. An OSH professional shall head the OSH organization and shall have the authority, responsibility, and visibility to manage and represent effectively the activity's OSH program. Implementation of the NAVOSH program is considered a command staff level function.

Accordingly, the head of the OSH organization shall report directly to the commanding officer of the shore activity.

b. Functional Responsibilities. "Direct Programs" refer to the OSH program areas that an OSH organization performs to support the command or activity of which it is a part. "Indirect Programs" are administrative activities in support of Direct Programs.

(1) For Direct Programs, as minimum core requirements, all OSH organizations shall:

(a) Manage OSH Programs. Plan, direct and administer the activity OSH program using the components of the process review and measurement system to focus efforts in those areas, which will yield the best overall outcomes for the commands safety and health program.

(b) Conduct OSH Reviews. Perform and document reviews and evaluations to ensure that appropriate OSH requirements and considerations affect all operations, facilities, material and equipment.

(c) Conduct OSH Inspections. Plan, conduct and document workplace inspections of all buildings, grounds, facilities, materials, equipment, devices, operations and conditions to ensure compliance with applicable policies, laws, regulations and standards. For detailed program information, refer to chapter 9, NAVOSH Inspection Program, and chapter 11, Inspections and Investigations of Workplaces by Federal and State OSH officials.

(d) Abate Hazards. Manage the program for the correction of workplace hazards. For detailed program information, refer to chapter 12, Hazard Abatement Program.

(e) Provide Consulting Services. Provide consulting services to all activity organizational elements and all levels of supervision on OSH principles and technical aspects and their application to employees and workplaces.

0304. Regional and Consolidated OSH Organizations

In some cases, it may be more effective and practical to establish a single OSH organization to meet the aggregate requirements of a number of small activities within the same

geographic area and/or to support tenants of an installation. Activities shall staff all such consolidated OSH organizations following the criteria described in section 0303.

a. Activities furnishing OSH services and users of those services, shall establish written agreements. The agreement shall specify the services provided. Administrative control over the OSH organization shall rest with the command supplying the service.

b. Activities should not change consolidated OSH organization services without prior negotiations between the activities and/or units receiving services. Organizations shall negotiate agreements on a fiscal year or an as needed basis, at which time adjustments shall be made to take into account differences in size or number of activities serviced, services required and cost of operation of the consolidated OSH organization.

c. It is strongly recommended that regional safety managers attain board certification through either the American Board of Industrial Hygiene or the Board of Certified Safety Professionals. Per section 0606, professional certification is recommended for OSH professionals.

0903. Workplace Inspections - Shore Activity Level

The Activity's Commanding Officer shall ensure routine workplace OSH inspections are conducted, and the cognizant medical activities provide occupational health support as necessary. Line managers/supervisors are responsible for day-to-day inspections and corrective actions.

a. Safety and health personnel shall inspect all workplaces at least annually. They shall inspect high hazard areas more frequently based upon an assessment of the potential for injuries, occupational illnesses or damage to Navy property. Major commands, installations or the local activity shall establish guidelines for increased frequency of inspections.

b. Section 0902 outlines qualifications for inspectors. In the event activities do not have the required expertise, they shall make arrangements with the appropriate echelon commander to obtain assistance.

c. Activities shall provide inspectors with appropriate technical test equipment, where required.

d. Activities shall conduct inspections in a manner to preclude unreasonable disruption of the operations of the workplace. Inspections shall be consistent with the operational concepts of the Navy and local commands. Activities may conduct these inspections with or without prior notice.

e. Inspectors may deny the right of accompaniment to any person whose participation interferes with a fair and orderly inspection or who lacks the required security clearance.

f. Inspectors shall discuss matters affecting safety and health with employees or employee representatives and offer them the opportunity to identify unsafe or unhealthful working conditions while remaining anonymous.

g. When an inspector discovers an imminent danger situation during an inspection, he/she shall immediately notify supervisory personnel (in certain cases the commanding officer of the activity). Activities shall initiate immediate abatement action or terminate the operation.

h. Inspectors shall provide NAVOSH Deficiency Notices for all risk assessment codes (RAC) 1, 2 and 3 deficiencies to the official in charge of the operation within a reasonable time, but not later than 15 working days after the inspection. Inspectors shall provide a written report of the inspection, including administrative findings, to the official in charge of the operation within 45 days of completion of the inspection. For notification purposes, they shall use OPNAV 5100/12, NAVOSH Deficiency Notice (appendix 9-B), or a computer-generated form that includes all the information of OPNAV 5100/12. Inspectors can group multiple identical deficiencies in the same organization (jurisdiction of the same supervisor) or worksite into a single notice.

i. Activities shall correct violations of NAVOSH standards and other deficiencies found during inspection per chapter 12.

j. When deficiency notices have been prepared, activities shall use section C of OPNAV 5100/12 to document follow-up inspections. They shall develop procedures for correcting unsafe or unhealthful working conditions that include a follow-up, to

the extent necessary, to determine whether the correction was made.

k. Activities shall retain inspection records for a minimum of 5 years.

Appendix 9-B
NAVOSH Deficiency Notice

OPNAV 5100-26

NAVOSH DEFICIENCY NOTICE		
SECTION A - DEFICIENCY INFORMATION	I.D. NO.:	
Organization:	Location:	
Description of Hazard:		
Standard Violated:	RAC:	
OSH Official:	Date:	
SECTION B - ABATEMENT STATUS (COMPLETE ALL APPLICABLE PARTS)		
• INTERIM CONTROLS		
• ABATEMENT PROJECT INITIATED		
Project Description:	Action Taken (Included Work Orders/Purchase Request numbers and date as appropriate):	
	Cost Estimate:	Completion Date (Est):
• DEFICIENCY CORRECTED		
Corrections Made:	Date:	
	Cost	
	Labor:	Material:
Signature:		
SECTION C - COMMENTS		

OPNAV 5100/12 (9-92)

1202. Hazard Abatement Processing and Tracking

Hazards can be identified through annual inspections, industrial hygiene surveys, employee hazard reports and other inspections. Regardless of the hazard identification method, activities shall process the hazard as follows:

a. Risk Assessment. The activity OSH office shall assign each identified/validated hazard, that cannot be corrected immediately, a risk assessment code (RAC). The RAC represents the degree of risk associated with the hazard and combines the elements of hazard severity and mishap probability, taking into account potential health effects from the hazard. Appendix 12-A provides instructions for calculating the RAC for asbestos deficiencies.

(1) Hazard Severity. The hazard severity is an assessment of the worst reasonably expected consequence, defined by degree of injury or occupational illness which is likely to occur as a result of a hazard. Activities shall assign hazard severity categories by Roman numeral according to the following criteria:

(a) Category I - Catastrophic: The hazard may cause death.

(b) Category II - Critical: May cause severe injury or severe occupational illness.

(c) Category III - Marginal: May cause minor injury or minor occupational illness.

(d) Category IV - Negligible: Probably would not affect personnel safety or health, but is, nevertheless, in violation of a Navy Occupational Safety and Health (NAVOSH) standard.

(2) Mishap Probability. The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation and affected population. Activities shall assign a letter to mishap probability according to the following criteria:

(a) Subcategory A - Likely to occur immediately

(b) Subcategory B - Probably will occur in time

(c) Subcategory C - Possible to occur in time

(d) Subcategory D - Unlikely to occur.

(3) Risk Assessment Code. The RAC is an expression of risk which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine HA priorities.

Hazard Severity	Mishap Probability			
	A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

RAC
1 - Critical
2 - Serious
3 - Moderate
4 - Minor
5 - Negligible

b. NAVOSH Deficiency Notice. The activity OSH office shall describe workplace hazards with a RAC of 1, 2, or 3 that cannot be corrected immediately, in Section A of a NAVOSH Deficiency Notice, OPNAV 5100/12, (see appendix 9-0). The OSH office shall forward a copy of the notice to the official in charge of the operation where the hazard exists. The workplace supervisor shall post a copy of the notice in the area of the hazard until the hazard has been corrected. The OSH office shall update the posted notice, as necessary, to accurately reflect the status of the abatement action and required interim controls.

NOTES:

1. Activities may distribute and post a computer-generated form that includes all the information required by OPNAV 5100/12.

2. The activity OSH office shall transcribe RAC 1, 2 and 3 hazards reported by higher echelon OSH personnel (Oversight Inspections and Command Inspections) or the Occupational Safety and Health Administration (OSHA) to NAVOSH Deficiency Notices. The activity OSH office may also use the notices for documenting the correction of RAC 4 and 5 hazards as deemed appropriate. The official in charge of the operation shall take prompt action to

correct the hazard and within 30 days of the date of the notice, he/she shall complete Section B of the NAVOSH Deficiency Notice and return a copy to the activity OSH office. Activities shall implement interim protective measures pending permanent abatement and list interim corrections on the notice. The notice shall also indicate the status of the hazard including whether or not the hazard has been corrected and specific abatement action taken.

c. Abatement Plans. Activities shall record hazards assigned RACs 1, 2, or 3 that require more than 30 days for correction in a formal HA plan. This plan shall include the following standard data for each hazard (or logical grouping of similar hazards):

(1) Dates of hazard identification
(2) Location of the hazard(s)
(3) Description of the hazard(s) including reference to applicable standards
(4) Calculated RAC or estimated RAC (with hazard severity, probability of single occurrence and annual personnel exposure cited separately)
(5) Interim control measures in effect
(6) Description of the abatement action, including estimated cost and completion date
(7) Abatement priority (see section 1205)
(8) Close-out statement, indicating: completed abatement action and cost, with date of completed action; or process discontinued or worksite vacated. A computerized file is acceptable, vice the hard copy, as long as it contains-all of the required close-out information. The OSH office shall make the HA plan available for review locally by recognized employee organizations, where applicable.

NOTE:

Activities may use a file of NAVOSH Deficiency Notices, appropriately completed, as the abatement plan. Activities with fewer than 50 annual deficiencies or projects that will take more than 30 days to correct, may use this approach. Activities with more than 50 deficiencies or projects annually that will take more than 30 days to correct shall develop a formal HA Plan and establish priorities for each project listed.

1203. Interim Controls

Activities may be unable to immediately abate deficiencies under normal working conditions, and some hazards may require temporary deviation from NAVOSH standards. Therefore, activities shall establish appropriate interim controls as soon as they identify the deficiency. OSH Offices shall document such controls on the NAVOSH Deficiency Notice per appendix 9-B. The OSH office shall review and approve interim protective measures in effect for more than 30 days and revise, as appropriate.

1204. Hazard Abatement Project Development
The identification of a hazardous condition and the development of a deficiency abatement project require the close cooperation of the activity's facilities management and OSH personnel. Shore activities can obtain specific engineering assistance from the cognizant Naval Facilities Engineering Command (COMNAVFACENGCOM) Engineering Field Division or Activity (EFD/A) via an Engineering Service Request. The proposed project should fully correct the hazard in the most effective manner.

1205. Prioritization of Hazard Abatement Projects
In any given year, the backlog of deficiencies may exceed the funds available for NAVOSH projects. It is, therefore, necessary that the Navy have a consistent and systematic methodology for the prioritization of these projects. In order to ensure that projects of highest importance receive first consideration, the Navy prioritizes projects as follows:

a. Locally Funded Projects. Activity OSH offices shall prioritize projects that do not meet the criteria for centrally managed funding under the NAVOSH HA program based on the RAC assigned to each identified hazard. See section 1202a for RACs. If several projects for correction of hazards with identical RACs exist, the activity OSH office shall assign priorities based on the number of persons potentially exposed to the hazard and the total cost. All public works center (PWC) commanding officers and activity facility engineers shall ensure that health and safety projects receive full consideration and are appropriately prioritized for execution with other local activity special projects.

b. Centrally Funded Projects. COMNAVFACENGCOM shall assign an abatement priority number (APN) per reference 12-3 for all proposed NAVOSH HA projects submitted. The APN which comprises the RAC and cost effectiveness index will be used in determining abatement priorities.

1206. Responsibilities

a. Shore activity commanding officers shall:

(1) Identify and correct hazards and maintain a current HA Plan with priorities established for each project listed. If the HA plan is maintained by the regional OSH office, it shall be done in such a manner that specific activity information (or plan) is readily available.

(2) Forward projects via the prescribed submission chain for hazards that cannot be corrected through local resources.

(3) Review, prioritize and maintain current active projects.

b. Commander, Naval Facilities Engineering Command shall:

(1) Submit to CNO(N45), by 15 November each year, a proposed NAVOSH HA program project execution plan per section 1204.

(2) Develop, prepare and submit, via the chain of command, budget documentation for the NAVOSH HA program.

(3) Provide to CNO, major claimants, sub-claimants and activities, management information, as may be necessary, relative to the NAVOSH HA program.

(4) Provide engineering review of all NAVOSH HA projects approved by major claimants.

(5) Manage the design and construction of NAVOSH HA projects per established procedures.

Appendix G - Selected OPNAV 5100.23G Provisions

OPNAV INSTRUCTION 5100.23G dtd 30 Dec 05
Subj: NAVY SAFETY AND OCCUPATIONAL HEALTH (SOH) PROGRAM MANUAL

Ref: (a) SECNAVINST 5100.10H
(b) OPNAVINST 5100.8G
(c) OPNAVINST 5100.19D
(d) SECNAVINST 5212.5D

1. Purpose. To affirm the Navy Safety and Occupational Health (SOH) Program for all Navy personnel and implement the following Department of Defense (DOD) instructions:

a. DODI 6055.1 of 19 August 1998, Department of Defense Safety and Occupational Health (SOH) Program.

b. DODI 6055.5 of 10 January 1989, Industrial Hygiene and Occupational Health.

c. DODI 6055.7 of 3 October 2000, Accident Investigation, Reporting, and Record Keeping.

d. DODI 6055.11 of 21 February 1995, Protection of DOD Personnel from Exposure to Radio frequency Radiation and Military Exempt Lasers (NOTAL).

2. Cancellations. (text deleted)

3. Discussion. References (a) and (b) provide policy and outline responsibilities for the implementation of the total Navy Safety and Occupational Health Program. The Navy program encompasses all safety disciplines such as aviation safety, weapons/ explosives safety, off-duty safety, traffic safety, and occupational safety and health. This instruction covers the implementation of the SOH Program. Forms in Chapters 8, 9, 12, and 13 have been revised, renamed and/or renumbered. Two new ergonomic forms have been added to Chapter 23. Injury and illness investigation, reporting and recordkeeping requirements have been removed from Chapter 14 and now reside in OPNAV 5102.1D/MCO P5102.1B. Chapter 13, Navy Occupational Safety and Health Cost Data and Chapter 26, Man-Made Vitreous Fibers, were eliminated and replaced by two new chapters; Chapter 13, Fall Protection Program and Chapter 26, Chemical-Biological-Radiological-Nuclear-Explosive (CBRNE) Events. References were updated with web links.

4. Action. All levels of command shall implement and manage the SOH Program in compliance with the policies, procedures, actions, and guidance set forth by this instruction. Reference (c) is the implementing document for forces afloat. Reference (d) provides guidance on records disposition and shall be followed by shore and afloat commands. The policies, procedures, and actions prescribed here are published without the necessity for implementing instructions from the Echelon 2 commands, bureaus, and offices, except where specifically directed. However, commands having significant SOH responsibilities should provide appropriate supplemental guidance.

Chapter 2 Responsibilities

0207. Regional and Activity Programs

General. An SOH program is an inherent responsibility of command and therefore, implementation, direction and control of the program shall be through the chain of command with line managers and supervisors being primarily responsible for ensuring safe and healthful operations and working conditions. For additional guidance, see paragraph 0207.d regarding responsibilities, paragraph 0303.a on organization, and paragraph 1202 on process-related and facility related hazards.

Shore regions, activities and commands, commanders, commanding officers, directors and officers in charge shall implement the items below: ...

c. Organize, staff, and maintain a safety function or safety office as required by chapter 3. Regional safety offices shall be established in accordance with paragraph 0304.

d. Ensure all personnel are fully aware of their obligations and personal responsibilities to the safety program. Establish clear lines of accountability.

e. Establish safety councils and committees at appropriate command levels per chapter 4 of this manual. Chair the council, or ensure it is chaired by the executive officer or equivalent, and ensure minutes are issued and maintained. ...

f. Establish and maintain liaison between the local safety office and other DOD regions or activities for coordination of specialty functions such as medical, fire, security, etc.

h. Ensure that all workplaces are inspected at least annually or more frequently based on the level of risk (see chapter 9).

i. Establish a hazard abatement program as required by chapter 12. ...

p. Establish a comprehensive self-assessment program for the command per chapter 5 and appendix 2-B.

CHAPTER 3 ORGANIZATION AND STAFFING

0301. Discussion

This chapter provides guidance on functional organization, staffing and responsibilities. An effective and dynamic command safety organization requires a structure that provides all levels of the command with good lines of communication to the commanding officer for safety matters.

0302. Organization of Safety Organizations at Headquarters Commands

Headquarters commands shall designate a safety official who will have sufficient authority and responsibility to represent effectively and support the headquarters commander in the management and administration of the headquarters command safety program. The designated safety official shall report directly to the headquarters commander. A safety organization, staffed and organized commensurate with the mission and functions of the command, shall support and report directly to the designated safety official. A safety professional shall head the safety organization. Professional certification is recommended, per paragraphs 0304.c and 0606. The designated command safety official shall:

a. Establish, coordinate, direct, and evaluate the effectiveness of safety policies, plans, programs, and procedures.

b. Serve as the focal point within the command for safety-related matters.

c. Provide technical advice, direction and guidance on safety matters to other commands or bureau organizational elements and to subordinate field activities.

d. Interpret safety standards and regulations and develop or participate in developing new or revised standards, when appropriate.

e. Conduct assessments of the effectiveness of the command's overall safety program by performing subordinate command management evaluations and reviewing self-assessments.

f. Serve as the headquarters command's representative on safety councils, committees and working groups established by higher authority and the private sector. The safety official shall serve as technical advisor to cognizant offices of the Chief of Naval Operations (CNO) on safety-related matters in areas over which the headquarters command is assigned cognizance.

g. Review illness/injury analyses from command activities to identify and initiate actions to improve the effectiveness of the safety program and reduce instances of injury and illness.

h. Foster safety awareness through appropriate promotional methods and channels of communication.

i. Ensure adequate consideration of safety features in the design, purchase or procurement of items over which the command exercises acquisition authority.

j. Plan, develop, participate and evaluate employee safety training in coordination with cognizant training groups, offices, and organizations.

k. Review and coordinate budget requirements, requests, and program objective memoranda for safety and coordinate budget submissions, as appropriate. Ensure that the safety official in each region and field activity have sufficient authority and responsibility to plan for and ensure funds for the staff, their equipment, materials and the training required to ensure implementation of an effective safety and occupational health program.

0303. Organization, Functional Responsibilities, and Staffing Criteria for Shore Safety Organizations

a. Organization.

(1) Each shore activity not receiving Base Operating (BOS) safety services from their cognizant Naval Region shall have a

safety organization, staffed and organized commensurate with the mission and functions of the command. A safety professional shall head the safety organization and shall have the authority, responsibility, and visibility to manage and represent effectively the activity's safety program. Implementation of the safety program is considered a command staff level function. Accordingly, the head of the safety organization shall report directly to the commanding officer of the shore activity.

(2) Shore activities receiving Base Operating Support (BOS) safety services from their cognizant Naval Region shall establish an organizational chart that includes safety as a staff function, reporting to the Commanding Officer. The description of this function shall state that the regional host Safety Department provides this service.

b. Navy Reorganization. On 1 October 2003, installation claimant consolidation occurred with the establishment of a new Echelon 2 Command: Commander, Navy Installations (CNI). The new reorganization places ownership of land and buildings under the command of CNI. Funding for safety within CNI is part of "Base Operating Support" (BOS). Other Echelon 2 commands retained "Mission Safety." ....

(2) BOS Safety. BOS functions are normally provided by the host command. BOS Safety includes all common and core installation management safety functions that are identified under the Installation Management BOS Safety umbrella, namely: Navy Safety and Occupational Health, Traffic Safety, Recreation and Off-duty Safety (RODS), and BOS-related Explosives Safety, as described below:

...

SOH - Provides support for management and coordination of region-wide program, including but not limited to inspections, evaluations, surveys, education, training, instructions, mishap prevention, accident investigation and reporting, and other activities involved with the operation of the Navy and Marine Corps safety and occupational health programs.

(c) Conduct Inspections. Plan, conduct and document workplace inspections of all buildings, grounds, facilities, materials, equipment, devices, operations and conditions to ensure compliance with applicable policies, laws, regulations, and standards. For detailed program information, refer to chapter 9, Inspection Program, and chapter 11, Inspections and

Investigations of Workplaces by Federal and State safety and health officials.

(d) Abate Hazards. Manage the program for the correction of workplace hazards. For detailed program information, refer to chapter 5, Prevention and Control of Workplace Hazards and chapter 12, Hazard Abatement Program.

0304. Regional and Consolidated Safety Organizations

Regionalization of safety services was established to meet the aggregate requirements of a number of activities within the same geographic area and to support tenants of an installation. Region Headquarters shall staff their consolidated safety organizations following the criteria described in section 0303.

a. Regions providing safety services and commands that receive those services, shall establish written agreements such as an Intra Service Support Agreement (ISSA) or memorandum of understanding (MOU). The agreements shall specify the services provided and the conditions under which they are provided. Administrative control over the region safety organization shall rest with the Region Headquarters Command.

b. Command/Activities shall negotiate agreements on a fiscal year or an as needed basis, at which time adjustments shall be made to take into account differences in size or number of activities serviced, services required, and cost of operation of the regional safety organization.

1202. Hazard Abatement Processing and Tracking

Hazards can be identified through annual inspections, industrial hygiene surveys, employee hazard reports and other inspections. Activity or regional OSH offices are responsible for managing hazard abatement. For hazards that are work process-related, the owner of the work process manages hazard abatement. For hazards that are facility-related, the owner of the facility manages hazard abatement. Regardless of the hazard identification method, hazards should be processed as follows:

Identified/validated hazard that cannot be corrected immediately

A. Risk Assessment code (RAC). The RAC represents the degree of risk associated with the hazard and combines the elements of hazard severity and mishap probability taking into account potential health effects from the hazard. Appendix 12-A

provides instructions for calculating the RAC for asbestos deficiencies.

(1) Hazard Severity. The hazard severity is an assessment of the worst reasonably expected consequence, defined by degree of injury or occupational illness which is likely to occur as a result of a hazard. The region or activities shall assign hazard severity categories by Roman numeral according to the following criteria:

(a) Category I - Catastrophic: The hazard may cause death.

(b) Category II - Critical: May cause severe injury or severe occupational illness.

(c) Category III - Marginal: May cause minor injury or minor occupational illness.

(d) Category IV - Negligible: Probably would not affect personnel safety or health, but is, nevertheless, in violation of a Navy OSH standard.

(2) Mishap Probability. The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation and affected population. The OSH office shall assign a letter to mishap probability according to the following criteria:

(a) Subcategory A - Likely to occur immediately

(b) Subcategory B - Probably will occur in time

(c) Subcategory C - Possible to occur in time

(d) Subcategory D - Unlikely to occur.

(3) RAC. The RAC is an expression of risk, which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine HA priorities.

Hazard Severity	Mishap Probability			
	A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

RAC

1 - Critical

2 - Serious

3 - Moderate

4 - Minor

5 - Negligible

b. OSH Deficiency Notice. The OSH office shall describe workplace hazards with a RAC of 1, 2, or 3 that cannot be corrected immediately, in Section A of a OSH Deficiency Notice, OPNAV 5100/12, (see appendix 9-B). The OSH office shall forward a copy of the notice to the official in charge of the operation where the hazard exists. The workplace supervisor shall post a copy of the notice in the area of the hazard until the hazard has been corrected. The OSH office shall update the posted notice, as necessary, to accurately reflect the status of the abatement action and required interim controls.

NOTES:

- The OSH office may distribute and post a computer-generated form that includes all the information required by OPNAV 5100/12.

- The OSH office shall transcribe RAC 1, 2 and 3 hazards reported by higher echelon OSH personnel (Oversight and Command Inspections) or the Occupational Safety and Health Administration (OSHA) to NAVOSH Deficiency Notices. The OSH office may also use the notices for documenting the correction of RAC 4 and 5 hazards as deemed appropriate.

The official in charge of the operation shall take prompt action to correct the hazard and within 30 days of the date of the notice, he/she shall complete Section B of the OSH Deficiency Notice and return a copy to the OSH office. Regions and/or activities shall implement interim protective measures pending permanent abatement and list interim corrections on the notice. The notice shall also indicate the status of the hazard including whether or not the hazard has been corrected and specific abatement action taken.

c. Abatement Plans. The OSH office shall record hazards assigned RACs 1, 2, or 3 that require more than 30 days for correction in a formal HA plan. This plan shall include the following standard data for each hazard (or logical grouping of similar hazards):

(1) Dates of hazard identification

(2) Location of the hazard(s)

(3) Description of the hazard(s) including reference to applicable standards

(4) Calculated RAC or estimated RAC (with hazard severity, probability of single occurrence, and annual personnel exposure cited separately)

(5) Interim control measures in effect

(6) Description of the abatement action, including estimated cost and completion date

(7) Abatement priority (see section 1205)

(8) Closeout statement, indicating completed abatement action and cost, with date of completed action; or process discontinued or worksite vacated. A computerized file is acceptable, vice the hard copy, as long as it contains all of the required closeout information.

Note:

The OSH office shall make the HA plan available for review locally by recognized employee organizations, where applicable.

1203. Interim Controls

Regions or activities may be unable to immediately abate deficiencies under normal working conditions, and some hazards may require temporary deviation from OSH standards.

Therefore, appropriate interim controls shall be established as soon as deficiencies are identified. OSH Offices shall document such controls on the OSH Deficiency Notice per appendix 9-B. The OSH office shall review and approve interim protective measures in effect for more than 30 days and revise, as appropriate.

1206. Responsibilities

a. Regional Commanders/Shore Activity Commanding Officers shall:

(1) Identify and correct hazards and maintain a current HA Plan with priorities established for each project listed. If the HA plan is maintained by the regional OSH office, it shall be done in such a manner that specific activity information (or plan) is readily available.

(2) Forward projects via the prescribed submission chain for hazards that cannot be corrected through local resources.

(3) Review, prioritize, and maintain current active projects.