

# AFRC Record of Environmental Consideration

START DATE: 9/1/2014		AFRC CONTROL NUMBER: 14-10
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Instructions: Section I to be completed by Proponent; Sections II and III to be completed by the Safety, Health & Environmental Office. Continue on page 2 or attach additional sheets as necessary and reference appropriate item number(s).

### SECTION I - PROPONENT INFORMATION

1. TO: Environmental Officer Safety, Health & Environmental Office	2. FROM (Proponent Organization, Functional Address Symbol): Code F	2a. TELEPHONE NO.: x2266
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3. TITLE OF PROPOSED ACTION:  
Repair Aircraft Hangar Fire Protection Systems

4. PURPOSE AND NEED FOR ACTION (Describe why you need to take this action):  
The existing fire protection system in Building 4853 was originally designed to support the shuttle hangar operations and is not properly sized to support the entire Center. The existing fire suppression systems in Hangars 4801, 4802, 4840, 4826 and 4833 do not comply with national standards. The fire pumping system in Building 4853 requires repair to provide sufficient flow and pressure to fire suppression systems around the Center. The systems in Hangars 4801, 4802, 4840, 4826 and 4833 need to be repaired and replaced to bring them into compliance with applicable standards.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.):  
The project would consist of demolition of four existing diesel motor-driven fire pumps and associated equipment from the central fire pumping station. Diesel fuel tanks would also be removed. Four new electric fire pumps would be installed with new controllers and fire alarm monitoring equipment. A new electrical substation would be required to support the new fire pump installations. Trenching would be required to install the new substation and installation of new concrete duct banks. Trenching and substation installation would occur in the vicinity of Building 4853. The diesel driven fire pumps, fuel storage systems, and associated equipment at Building 4840 would be removed. (Contin. Pg 2)

6. PROPONENT (Name): Justin Reid	6a. SIGNATURE:	6b. DATE:
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### SECTION II: PRELIMINARY ENVIRONMENTAL ANALYSIS. (Check appropriate box and describe potential environmental effects and mitigations.) (+ = Pos. Effect; 0 = No Effect; - = Neg. Effect; U = Unknown Effect)

	+	0	-	U
7. NOISE/LAND USE ZONE (Noise, accident potential, land use, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. AIR QUALITY (Emissions, attainment status, conformity, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. WATER RESOURCES (Quality, quantity, source, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. SAFETY & OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives, safe qty-distance, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. HAZARDOUS MATERIALS/WASTE (Use, storage, generation, solid waste, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. BIOLOGICAL RESOURCES (Floodplains, flora, fauna, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. CULTURAL RESOURCES (Architectural, historical, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. GEOLOGY AND SOILS (Topography, Superfund Program, seismicity, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. OTHER (Potential impacts not addressed above.) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17.  PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # d(2)(i); OR  
 PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. ENVIRONMENTAL OFFICE CERTIFICATION (Name): Jennifer Gocke	18a. SIGNATURE: 	18b. DATE: 9 June 14
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Box 5 continued:

The overhead fire suppression system would be changed to a wet pre-action system utilizing new linear heat detection in several facilities. Components of the old overhead foam sprinkler system would be removed from each hangar. Old overhead foam generating components include piping, 3% Aqueous Film Forming Foam (AFFF) concentrate, foam concentrate tanks, and foam concentrate pumps. The existing low level 3% AFFF protection system consisting of monitor nozzles would be demolished where applicable. A new low level foam protection system utilizing 2% high expansion foam generators would be installed within each hangar where work is performed. The high expansion foam generator's air intakes would be required to be ducted to the exterior through the roof. The new low level foam protection system's foam proportioning methods, concentrate storage, and delivery systems would be modified or replaced. The control system activating the low level foam protection system would be replaced and integrated into the existing fire alarm system. Activation and abort stations would be provided throughout each hangar where work is performed. Hangars 4802 and 4801 would have new fire suppression system water connections. Underground connections would be made on the west side of 4802 and east side of 4801. Trenching would include removal and replacement of concrete in these areas. Draft curtains would be installed or modified for each fire sprinkler zone in affected facilities.

## Environmental Management Requirements Checklist

Record of Environmental Consideration #14-10, *Repair Aircraft Hangar Fire Protection Systems*, qualifies for **Categorical Exclusion d(2)(i), Operations and management activities including routine maintenance, minor construction or rehabilitation, minor demolition, minor modification, minor repair, and continuing or altered operations at, or of, existing NASA or NASA-funded or –approved facilities and equipment, such as buildings, roads, grounds, utilities, communication systems, and ground support systems, such as space tracking and data systems (14 CFR 1216.304)**. Environmental impacts were considered to be insignificant based on anticipated implementation of the following requirements. Extraordinary circumstances, as defined in 14 CFR 1216.304(c), have been considered. Contact the Environmental Officer at x2307 for any questions or concerns.

1. Notify the Environmental Office (Code SH) if the project scope or proposed activities change. Please allow adequate time for analysis of potential environmental impacts.
  - a. Per the project manager, the exterior of Buildings 4801, 4800, and 4802 will not be impacted during project activities. Also, the landscape around these facilities would not be changed from current conditions. These areas may be designated as a Historic District on the National Register of Historic Places in the near future; therefore, changes in the current design would require additional coordination with the State Historic Preservation Officer. Contact Code SH at X2307 if project activities change.
2. If required per contract specifications, an Environmental Protection Plan (EPP) shall be submitted to Code SH for review prior to onset of project activities. All minimization measures contained in the environmental analysis shall be included in the EPP.
3. Major noise sources on the flightline are from aircraft operations, engine testing, and the operation of powered aircraft ground equipment. As such, workers along the flightline may be exposed to increased noise levels that may be above acceptable levels established by Occupational Safety and Health Administration (OSHA) regulations. The contractor/proponent shall be responsible for implementing OSHA hearing protection measures for their employees.
4. A short-term degradation of air quality may occur during the proposed project. These emissions would be minor and are well below the *de minimis* thresholds for non-attainment areas; therefore, a formal conformity determination is not required. Vehicle emissions from additional personnel required for temporary duty are exempt under 40 CFR 51.853(c)(2)(vii) & (x) and were not evaluated. Air quality impacts from this project would not be significant.
5. Equipment with an internal combustion engine over 50 bhp may need an operating permit from the Eastern Kern County Air Pollution Control District (EKAPCD) or would be registered with the California Statewide Portable Equipment Registration Program. Contact the Environmental Office at extension 2307 for further information and to coordinate your application. Allow a minimum of 120 days lead time to obtain a permit.
  - a. If a portable generator comes from outside EKAPCD, notification to the receiving air district must be done and approval given prior to use.

6. During all construction, earth moving, or demolition activities; operation on unpaved surfaces; or when there is a potential that dirt/dust could become airborne, project managers shall have a process in place to prevent this occurrence (i.e., use of water truck, containerizing materials, covering bulk-load transportation truck beds).
7. Earth moving vehicles such as dump trucks, CATs , etc. shall not be left in idle for longer than 5 minutes, unless being actively used on the work site.
8. Driving on unpaved surfaces shall be at speeds between 5 and 35 mph, depending on weather and surface conditions, to ensure dust generation is kept to a minimum.
9. During high wind conditions, operations shall be stopped until wind levels drop low enough that dust controls will be effective.
10. During high wind conditions, open storage piles and vehicles hauling bulk materials shall be covered.
11. No emission resulting from the use of equipment shall cause injury, detriment, nuisance, annoyance to or endanger comfort, repose, health, or safety of any considerable number of persons or public.' (Rule 419 and CH&SC Sec 41700).
12. Domestic and industrial wastewater must be discharged to the sanitary sewer. Industrial wastewater discharges must be evaluated by Code SH for Edwards AFB permitting requirements. Contact the Environmental Office at extension 2307 for assistance.
  - a. There is a potential for a spill of the suppression concentrate to occur during project activities. Controls shall be in place to prevent hazardous materials from entering into the sewer system or onto native soil.
13. Project personnel shall be properly trained in working in confined spaces. Contact Code SH (x2307) for more information and requirements.
14. Asbestos and/or lead paint may be present in affected facilities or roadways. An evaluation and determination should be made as to whether these materials would be disturbed by project activities. If they would be disturbed, proper safety, health, and environmental protocols would need to be developed and followed. Lead-based paint and/or asbestos shall be abated by a licensed contractor prior to construction activities. All work must be conducted in a manner that does not expose workers to lead or asbestos as outlined in 40 CFR Parts 61 and 763, 29 CFR Parts 1910 and 1926, and 8 CCR Section 5216. Also, a written notification (per the National Emissions Standards for Hazardous Air Pollutants Program) must be made to the Eastern Kern County Air Pollution Control District at least 10 working days prior to the start of asbestos abatement activities. For more information contact of Code XV at extension 2319.
15. Hazardous materials and hazardous waste shall be handled in accordance with applicable regulations. All hazardous materials used at Armstrong Flight Research Center shall be included in the AFRC Chemical Management System, DCP-S-102. Copies of Safety Data Sheets shall be submitted to Code SH for approval prior to bringing hazardous materials on site. For more information contact Code SH at extension 2307.
16. All hazardous materials brought on site by a contractor must be taken off-site at the completion of the project.

17. Demolition and disposal (including sale) of any structure containing hazardous or toxic materials shall be approved by Code SH. For more information contact Code SH at extension 2307.
18. Demolition and disposal of construction and demolition materials and debris, including non-hazardous waste, shall be diverted from landfill disposal at a rate of 50% or greater as required by Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.
19. All spills or releases of hazardous materials or waste that occur during this project (regardless of quantity or location of spill) must be reported immediately to the Environmental Office (Code SH) at extension 2307.
20. Hazardous wastes are subject to land disposal restriction requirements. Signed hazardous waste disposal manifests shall be required for all hazardous waste that may be generated on this project to include (but not limited to) ACM, lead, mercury, chromium, heavy metal-based paints, treated wood waste, and/or PCB-containing wastes prior to transportation for off-site disposal to a landfill approved by AFRC, and California Department of Toxic Substance Control (DTSC) or Environmental Protection Agency. **The proponent/contractor shall submit all manifests to Code SH for signature prior to shipping waste off-site.** Contact Code SH at extension 2307 for submittal requirements.
21. Coordinate with the Aboveground Storage Tank Program Manager at X2307 to coordinate removal and installation of diesel fuel tanks. Accurate tank data shall be captured properly on all Environmental Management documentation.
22. All design drawings and statements of work shall be submitted to Code SH in order for appropriate personnel to ensure that applicable regulations would be followed for the tank installation.
23. Inert debris shall only be stored on site for 6 months if it has not been processed and sorted for resale or reuse. Inert debris that has been processed and sorted for resale, or reuse, shall only be stored on site for 18 months. Contact the Environmental Office (Code SH) at extension 2307 for assistance.
24. Concrete rinsate (waste) generated from concrete trucks during project activities shall be discharged in a designated area within the project site (approved by the Environmental Office). Rinsate shall be discharged onto a lining (i.e., tarp) or into a lined container. At project completion, disposal of concrete waste in an approved landfill shall be the responsibility of the contractor.
25. All project personnel shall complete desert tortoise awareness training prior to project activities. Contact the Environmental Office (Code SH) at extension 2307 to schedule training at least 72 hours in advance.
  - a. Open excavations of any kind created during project activities shall be secured at the end of each day by backfilling, placing a cover over the excavation, installing a temporary Code SH-approved desert tortoise fence, and/or ramping excavations at a 3:1 slope. If it is decided to cover the excavation, materials used must completely prevent all wildlife from entering.

- b. Excavations left unsecured during the workday shall be checked three times per day (morning, midday, and late afternoon) for trapped animals. If any animals are found in an excavation, immediately notify the Environmental Office (Code SH) at extension 2307.
  - c. Any pipes stored within the area shall be capped on open ends or elevated at least 12 inches off the ground to prevent entry by desert tortoise or other wildlife.
  - d. All trash shall be contained within raven-proof (covered) containers and removed from the project site.
26. Contact the Environmental Office (Code SH) at extension 2307 if an active bird nest (nest with eggs, unfledged birds, or adult birds observed in the nest) is found within the project area and cannot be avoided.
27. In the event of discovery of human remains or cultural items, immediately stop any excavation/digging and notify the Environmental Office (Code SH) at extension 2307.
28. The use of fill material from an on-base borrow pit shall come from an approved borrow site as described in the *Environmental Assessment for Borrow Sites at Edwards Air Force Base, California* (USACE and AFFTC 1996). Prior to removing material from the borrow pit, a 412 TW/CEV biologist shall be contacted for a presurvey. Contact the Environmental Office (Code SH) at extension 2307 for more information or assistance. A presurvey shall be coordinated at least 3 days in advance.
- a. There are no approved borrow pits at Armstrong Flight Research Center.
29. The project is located in close proximity to Environmental Restoration Program (ERP) monitoring wells. Damage to ERP equipment must be avoided (includes covering well heads with asphalt). Contact the Environmental Office (Code SH) at extension 2307 for exact locations.
- a. Care must be taken to avoid disturbing monitoring well casings. Locate all well casings within the work area and avoid all excavations or heavy equipment operation that may damage monitoring wells.
30. This project is located within a contamination plume, (see attached map for plume boundaries). Contaminated soil and/or groundwater may be encountered below the ground surface. Guidelines for excavation within the plume boundary are attached. If the proponent/contractor notices soil discoloration or odors during activities, they shall report this observation immediately to the Environmental Office (Code SH) at extension 2307.
31. This project will require a D-WK 808-8, *Facilities Engineering Excavation Permit* (digging permit). The proponent/contractor shall coordinate the digging permit. Contact Code F at extension 3370 for specific requirements.
32. Project activities involving welding, torching, cutting and brazing require an AF Form 592, *Welding, Cutting and Brazing Permit* (Hot Work Permit) from the Base Fire Department. For further information on hot work permits, contact Code SH at extension 2307.