FINAL

ENVIRONMENTAL CONDITION OF PROPERTY REPORT

SFC MINORU KUNIEDA
U.S. ARMY RESERVE CENTER (HI003)
470 WEST LANIKAULA STREET
HILO, HI 96720

Prepared For:

U.S. Army Corps of Engineers – Louisville District
Engineering Division – Environmental Engineering Branch
600 Dr. Martin Luther King, Jr. Place
Louisville, Kentucky 40202-2232

MAY 2007

CERTIFICATION

All information/documentation provided accurately reflects the environmental condition of the property. This ECP Report is in general accordance with the U.S. Department of Defense (DoD) requirements for completion of an Environmental Condition of Property (ECP) Report.

WAYNE E. MITSKO **DATE**
Environmental Division ARIM
Chief, Environmental Division
9TH Regional Readiness Command

The undersigned certifies the contents of this report are in general accordance with DoD policies for the completion of an ECP report.

05/22/07

LENARD GUNNELL, P.G. **DATE**
Project Geologist
U.S. Army Corps of Engineers

Executive Summary

CH2M HILL, under contract to the U.S. Army Corps of Engineers, Louisville District, has prepared this Environmental Condition of Property (ECP) Report for the SFC Minoru Kunieda U.S. Army Reserve (USAR) Center (Facility ID HI003), hereafter referred to as the "Property" or "USAR Center." The Property is located at 470 West Lanikaula Street, Hilo, Hawaii, 96720, and encompasses approximately 3.7 acres.

This ECP Report was conducted in conformance with the Department of Defense's Base Redevelopment and Realignment Manual, DoD 4165.66-M, Army Regulation 200-1, and the American Society for Testing and Materials Designation D6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys.*

This ECP Report details the history of the Property, including the USAR and any prior tenant uses of the Property and the resulting environmental condition of the Property.

The USAR Center is on approximately 3.7 acres of land with five permanent structures: an administration building, an assembly hall, a vehicle maintenance shop, a vehicle maintenance garage, and a vehicle motor pool garage. The USAR Center is currently occupied by one unit, the Company A, 411th Engineer Battalion (Combat Heavy).

Based on a review of aerial photographs and U.S. Geological Survey topographical maps dating back to 1949, the Property was developed between 1963 and 1977. The initial building was constructed in or after 1964 and originally served as the home station for infantry and engineer troops. Other structures were constructed in the late 1970s and early 1980s. The Property has traditionally served as an Area Maintenance Support Activity (AMSA) and training facility, and has provided a location for classroom training, as well as intermediate level maintenance on vehicles and equipment (including heavy engineer equipment) and temporary storage for military vehicles and equipment.

Areas of potential environmental concern were reviewed and CH2M HILL found the following relating to the environmental condition of the Property:

- Former cesspool closure: the former cesspool at the USAR Center was closed in place approximately 2 years ago. While it is unknown whether there has been a hazardous substance release from the cesspool, available information indicates that closure of this cesspool was not conducted in accordance with Hawaii Department of Health (HDOH) motor vehicle waste cesspool closure requirements.
- Existing documentation indicates that releases of petroleum may have occurred at the former wash rack location because the former wash rack used to drain directly to adjacent soils. It is unknown whether releases at the former wash rack have impacted soil or groundwater at the former wash rack location.
- Battery acid release at the battery storage area: evidence that a release(s) of battery acid has occurred at the battery storage room was observed during the 2006 site

reconnaissance. Etched concrete and stressed vegetation indicate that released acids migrated out of the storage room and across a concrete sidewalk into a grassy area.

- Petroleum release at the military equipment parking (MEP) area: site records indicate that minor releases of petroleum products have been an ongoing issue at the MEP and motor pool areas, resulting in petroleum, oil, and lubricant (POL)-impacted stormwater runoff. Stormwater sampling records indicate that chemical concentrations exceeding allowable levels have been detected at the MEP area, and that a build up of oily sludge was observed at the stormwater discharge point at the north edge of the MEP area.

In accordance with Department of Defense policy defining the classifications (see Sherri Goodman Memorandum dated 21 October 1996), the Property has been classified as Type 7, an area or parcel of real property that is unevaluated or requires additional evaluation. This classification does not include categorizing the property based on *de minimis* conditions that generally do not present material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

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Abbreviations and Acronyms

The following is a comprehensive list of abbreviations and acronyms that are used throughout this report.

ACM	Asbestos-containing material
AMSA	Area Maintenance Support Activity
AR	Army Regulation
AST	Aboveground storage tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
BRRM	Base Redevelopment and Realignment Manual
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	CERCLA Information System
CFR	Code of Federal Regulations
COC	Chemicals of concern
CORRACTS	Resource Conservation and Recovery Act corrective action
DoD	Department of Defense
ECP	Environmental condition of property
EDR	Environmental Data Resources, Inc.
ENCOM	Engineering Command
ERNS	Emergency Response Notification System
ESG	Engineer Support Group
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System (USEPA)
HDOH	Hawaii Department of Health
INST CONTROL	Institutional Controls (USEPA sites with)
kg	kilogram
LBP	Lead-based paint

LUST	Leaking underground storage tank
MEC	Munitions and explosives of concern
MEP	Military equipment parking
NFA	No further action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSN	U.S. Department of Defense National Supply Number
PCB	Polychlorinated biphenyl
pCi/L	picoCuries per liter of air
POL	Petroleum, oil, and lubricant
POV	Privately owned vehicle
RCRA	Resource Conservation and Recovery Act
RCRIS	RCRA Information System
RRC	Regional Readiness Command
SHWS	State Hazardous Waste Sites (Hawaii Department of Health)
SPILLS	Spills Release Notifications (Hawaii Department of Health)
TMK	Tax map key
TSD	Treatment, storage, or disposal
USACE	U.S. Army Corps of Engineers
USAR	U.S. Army Reserve
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	Underground storage tank
YMCA	Young Men's Christian Association

1 Introduction

CH2M HILL, under contract to the U.S. Army Corps of Engineers (USACE) Louisville District Engineering Division, was authorized to conduct an Environmental Condition of Property (ECP) report for the SFC Minoru Kunieda U.S. Army Reserve (USAR) Center. The facility is located at 470 W. Lanikaula Street, Hilo, Hawaii, and is hereafter referred to as the "Property" or "USAR Center." CH2M HILL prepared this ECP report under contract number W912QR-04-D-0020, Task Order No. 0018, with the Louisville District USACE.

A visual nonintrusive reconnaissance of the Property was conducted on August 1, 2006, in support of the ECP. The reconnaissance purpose was to visually obtain information indicating the likelihood of recognized environmental conditions associated with the Property or adjacent properties.

In preparing this ECP report, CH2M HILL gathered information from the available records and previous work from others; interviews with individuals purporting to be familiar with the Property; and observations from a site reconnaissance. The accuracy of the information obtained from these sources was not verified by CH2M HILL. As such, CH2M HILL will make no warranty, expressed or implied, relative to the accuracy, completeness, or reliability of the information used to create the records and reports prepared by others.

1.1 Purpose of Environmental Condition of Property

The Military Department with real property accountability shall assess, determine, and document the environmental condition of all transferable property in an ECP Report. This ECP Report is based on readily available information. Pursuant to the Department of Defense's (DoD) policy, set forth in the Base Redevelopment and Realignment Manual (BRRM) (DoD 4165.66-M, March 1, 2006) Section C8.3, the primary purposes of the ECP Report include the following:

- Provide the Army with information it may use to make disposal decisions.
- Provide the public with information relative to the environmental condition of the Property.
- Assist in community planning for the reuse of Base Realignment and Closure (BRAC) property.
- Assist federal agencies during the property screening process.
- Provide information for prospective buyers.
- Assist prospective new owners in meeting the requirements under U.S. Environmental Protection Agency's (USEPA) "All Appropriate Inquiry" regulations.
- Provide information about completed remedial and corrective actions at the property.

- Assist in determining appropriate responsibilities, asset valuation, and liabilities with other parties to a transaction.

The ECP Report contains the information required to comply with the provisions of 40 Code of Federal Regulations (CFR) Part 373, which require that a notice accompany contracts for the sale of, and deeds entered into, for the transfer of federal property on which any hazardous substance was stored, released, or disposed of. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(h) stipulates that a notice is required if certain quantities of designated hazardous substances have been stored on the property for 1 year or more—specifically, quantities exceeding 1,000 kilograms (kg) or the reportable quantity, whichever is greater, of the substances specified in 40 CFR 302.4, or 1 kg of acutely hazardous waste as defined in 40 CFR 261.30. A notice is also required if hazardous substances have been disposed of or released on the property in an amount greater than or equal to the reportable quantity. Army Regulation (AR) 200-1 requires that the ECP Report address asbestos, lead-based paint (LBP), radon, and other substances potentially hazardous to human health.

This ECP Report used the American Society for Testing and materials (ASTM) Designation D6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys*, the BRRM, CERCLA § 120, and AR 200-1.

1.2 Scope of Services

This ECP report covers the 3.7-acre USAR Center located at 470 West Lanikaula Street, Hilo, Hawaii. The Property is bounded by vacant land used for flood control purposes to the north, West Lanikaula Street and the University of Hawaii at Hilo campus to the south, a Young Men's Christian Association (YMCA) to the east, and a preschool to the west. All site maps, figures, and aerial photographs referenced herein are provided in Appendix A, while Appendix B contains the photographs taken during the August 1, 2006, site reconnaissance. Appendix C contains the Property warranty deeds and chain of title information, and lease or permit agreements if applicable. Relevant historical environmental documents and reports are provided in Appendix D, while Appendix E contains the Environmental Data Resources, Inc. (EDR) radius search reports commissioned for this effort.

This ECP report classifies the Property into one of seven DoD Environmental ECP categories as defined by the Deputy Under Secretary of Defense Memorandum, *Clarification of "Uncontaminated" Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations*, dated October 21, 1996. The property classification categories are as follows:

- ECP Area Type 1—An area or parcel of real property where no release or disposal of hazardous substances or petroleum products or their derivatives has occurred (including no migration of these substances from adjacent properties).
- ECP Area Type 2—An area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred.
- ECP Area Type 3—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.

- ECP Area Type 4—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred and all remedial actions necessary to protect human health and the environment have been taken.
- ECP Area Type 5—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred and removal or remedial actions, or both, are underway, but all required actions have not yet been taken.
- ECP Area Type 6—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but required response actions have not yet been initiated.
- ECP Area Type 7—An area or parcel of real property that is unevaluated or requires additional evaluation.

2 Site Location and Physical Description

2.1 Site Location

The USAR Center is located in the east side of the island of Hawaii, within the southwest portion of the Hilo District, at 470 W. Lanikaula Street, Hawaii, 96720. The 3.7-acre parcel is situated on the north side of West Lanikaula Street (Hawaii County tax map key [TMK] number 324-056-016), as shown in Figures 1 and 2 in Appendix A.

2.2 Asset Information

Facility Name and Address:	SFC Minoru Kunieda U.S. Army Reserve Center 470 W. Lanikaula Street Hilo, Hawaii
Property Owner:	U.S. Government
Date of Ownership:	October 23, 1962
Current Occupant:	U.S. Army Reserve Company A, 411th Engineer Battalion (Combat Heavy)
Zoning:	RS-10, Residential
County, State:	Hawaii, Hawaii
U.S. Geological Survey (USGS) Quadrangle(s):	Hilo, Hawaii
Section/Township/Range:	Not Applicable
Latitude/longitude:	19° 42′ 13″N; 155° 4′ 50.9″W

Legal Description:

LOT A, Portion of the Government (Crown) Land of Waiakea, Waiakea, South Hilo, Hawaii

Beginning at the east corner of this lot, the south corner of Lot B, and on the northwest side of Lanikaula Street, the coordinates of said point of beginning referred to Government Survey Triangulation Station "MALAY" being 1524.85 feet South and 5,598.62 feet East, as shown on Government Survey Registered Map 4103, thence running by azimuths measured clockwise from True South:-

1. 58° 10′ 248.43 feet along the northwest side of Lanikaula Street;
2. Thence along the northeast side of Road Reserve, 50.00 feet wide, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being 103° 10′ 28.28 feet;

3. 148º 10′ 370.00 feet along the northeast side of Road Reserve, 50.00 feet wide;
4. Thence along the easterly side of Road Reserve, 50.00 feet wide, on a curve to the right with a radius of 268.43 feet, the chord azimuth and distance being 193º 10′ 379.62 feet;
5. 328º 10′ 658.43 feet along Lot B, to the point of beginning and containing an area of 3.700 acres.

2.3 Physical Description

The USAR Center is located on a 3.7-acre parcel on the southwestern side of Hilo, Hawaii and was constructed in 1964 and served as the home station for infantry and engineer troops. The Area Maintenance Support Activity (AMSA) subshop onsite has traditionally provided intermediate level maintenance on vehicles and equipment (to include heavy engineer equipment).

There are five main facilities at the USAR Center. They include an administration building, an assembly hall, a vehicle maintenance shop, a vehicle maintenance garage, and a vehicle motor pool (with two covered garages). There is also a flammable materials storage locker, a hazardous materials storage shed, and a wash rack equipped with a water recycling system. Paved, privately owned vehicle (POV) parking lot areas border the structures to the east, and a military equipment parking (MEP) area is located at the north edge of the facility. Based on aerial photographs, construction of the assembly hall was completed during the 1960s. The other structures were constructed at a later date. No specific records were available documenting completion dates for the structures, but aerial photos indicate that the main buildings now present at the site were completed by the mid-1980s. All structures are on concrete foundations, and consist of either concrete block walls with built-up asphaltic roof materials, structural steel framing with corrugated metal sides and roofs, or a combination of both. Chain-link security fencing topped with barbed wire encloses the Property.

Approximately one-third of the Property is covered by impervious surface features such as asphalt parking areas, driveways, concrete walkways, and building footprints. The remaining land is grassy with occasional shrubs and small trees. The layout of the facility is presented in Figure 3 in Appendix A.

Administration Building, Building 1

Building 1 is a one-story office and meeting facility. The building is constructed of concrete masonry with an asphalt roof. Rooms in the building consist of administrative offices, conference rooms, lavatory facilities, a weapons vault, a kitchen, and an exercise facility. A utility room containing a heating, ventilating, and air conditioning system is present within the building. Floor drains were noted in the men's and women's lavatories, and utility room. The interior layout of the administration building is shown in Figure 4 in Appendix A.

Assembly Hall, Building 2

Building 2 is a structural steel and masonry meeting hall with a kitchen and supply room located adjacent to the meeting hall. This building has a reinforced concrete with steel frame foundation, concrete block and corrugated metal walls, and both corrugated metal and asphalt roof areas. Approximately 75 percent of the interior is used for the meeting hall, while the remainder is dedicated to the kitchen and supply room.

This facility formerly functioned as a kitchen, and meeting and mess hall. Presently its functions also include serving as warehouse space for critical equipment storage (field supplies and equipment). Outside of the kitchen area along the east side of the building is a loading dock with a grease trap, and a wash station with a secondary containment curb. Floor drains were noted in the kitchen and at the wash station at the loading dock. The interior layout of the assembly hall is shown in Figure 5 in Appendix A.

Area Maintenance Support Activity Subshop

The AMSA Subshop facility consists of three buildings, the vehicle maintenance shop, the vehicle maintenance garage, and the vehicle motor pool garage. A MEP area is located north of the vehicle maintenance garage. Individual buildings comprising the motor pool facility are described below:

- **Vehicle Maintenance Shop, Building 3.** Building 3 is the vehicle maintenance shop, which consists of a vehicle maintenance bay, an equipment storage locker, a parts washing station, a vehicle battery storage area, and an office. The floor within the vehicle maintenance bay is constructed of steel-reinforced concrete, with construction joints visible. The building is constructed of concrete masonry with a corrugated steel roof. There is a floor drain below the parts washing station that is not connected to the parts washing station (the parts washing station was observed to be a self-contained unit during the site reconnaissance). Vehicle equipment and parts are stored in a fenced enclosure within the maintenance bay. The facility has historically and is currently used to perform vehicle maintenance.

  Used vehicle batteries are stored in a separate room at the east edge of the building. The building has a steel-reinforced concrete floor. A maintenance operations office is located at the north end of the building. The interior layout of the vehicle maintenance shop building is shown in Figure 6 in Appendix A.

- **Vehicle Maintenance Garage, Building 4.** Building 4 is a covered vehicle maintenance garage located just north of Building 3, open at the south side, and constructed of structural steel with corrugated metal walls and roof. The floor within the maintenance garage consists of asphalt pavement. The facility has historically and is currently used to perform vehicle maintenance. Stains observed on the asphalt pavement during the site reconnaissance indicate that de minimis releases of POL have occurred as a result of leaks from vehicles or equipment stored in this area.

  A flammables locker and hazardous materials storage shed are located at the west edge of Building 4.

- **Vehicle Motor Pool Garage, Building 5.** Building 5 consists of two covered vehicle motor pool garages located west of Buildings 3 and 4. The motor pool buildings are

constructed of structural steel with corrugated metal walls and roof. The floor within the motor pool consists of asphalt pavement. The facility has historically and is currently used to store vehicles and equipment. Stains and minor petroleum, oil, and lubricant (POL) leaks observed on the asphalt pavement during the site reconnaissance indicate that de minimis releases of POL have occurred as a result of leaks from vehicles or equipment stored in this area.

Vehicle Wash Rack

The wash rack area is located near the northeast corner of the Property within the MEP area, and is covered by an open-walled structure constructed of structural steel with corrugated metal roofing. The wash rack area, which is accessed by an exterior ramp, contains a floor drain connected to the industrial waste collection and water recycling system. The area is currently used for vehicle and equipment washing.

Historically, vehicle washing was conducted at the former wash rack location, located west of the vehicle maintenance shop adjacent to the southeast corner of the vehicle motor pool garage. The former wash rack was demolished in 1995 and construction of the current wash rack in the MEP area was initiated (Design Division Honolulu Engineer District, 1995). The approximate location of the former wash rack is a paved area adjacent to the southeast corner of the vehicle motor pool garage, just south of the current flammables locker. During the historical record review, evidence was found indicating that petroleum contaminated soil was a concern during the removal of the wash rack; however, no report documenting the environmental condition at the former wash rack upon demolition was identified.

Vehicle Grease Rack

Historic site plans for the facility indicate a vehicle grease rack was located along the east side of the vehicle maintenance shop. The grease rack is no longer present, and no further records about the grease rack were reasonably available for review.

Hazardous Waste Storage Area and Flammables Locker

The hazardous waste storage area and flammables locker are located adjacent to the vehicle maintenance garage. The hazardous waste storage area consists of a low masonry wall with wood supports and a corrugated metal roof. The flammables locker consists of a steel storage container with a secondary containment built into the floor. Hazardous waste materials, including used oil and transmission fluid, are stored in 55-gallon drums on or within secondary containment within the hazardous materials storage area. New motor oil, transmission fluid, paints, and other POL are stored in 55-gallon and smaller containers within the flammables locker.

Military Equipment Parking Area

A paved MEP area is located at the north end of the Property. The pavement slopes downward towards the northeast corner of the lot. Stormwater discharges at an asphalt swale along the north edge of the MEP area. POL staining on the asphalt at the drainage swale was observed during the site reconnaissance. The area has historically and is currently used to store military vehicles and equipment.

2.4 Site Hydrology and Geology

The USAR Center and Hilo are located within the southeastern portion of Hawaii Island, along the lower slopes of the Mauna Loa volcano. The area is characterized by topography that slopes down towards the ocean at Hilo Harbor to the north-northeast of the Property. Both Hilo and the USAR Center are found on the USGS 7.5 minute Hilo quadrangle map. Based on the topographic map, surface elevations at the site range from approximately 90 to 110 feet above mean sea level.

2.4.1 Surface Water Characteristics

Figure 7 in Appendix A provides a portion of the 1995 Hilo, Hawaii, USGS topographic map that includes the Property. In the immediate vicinity of the Property, the land surface gently slopes towards Hilo Bay located north-northeast of the Property.

Stormwater sheet flows offsite to lower topographic areas north and east of the facility. Runoff from the MEP area flows to an asphalt drainage swale located at the north edge of the MEP area. Surface runoff from the POV parking areas flows down grassy slopes to the adjoining properties to the east and northeast of the facility.

Stains on the pavement indicate that stormwater runoff from the paved area fronting the south side of the vehicle maintenance shop flows to a grassy swale near the perimeter of the Property east of the building.

Two storm drains are present at the facility. One is located in the paved area fronting the south side of the vehicle maintenance garage, which drains to a discharge point near the property line at the northwest corner of the Property. The second is located in the POV parking lot adjacent to the northeast corner of the assembly hall, which drains to a grassy swale near the perimeter of the Property northeast of the building and POV parking area.

The closest surface water features located in the immediate vicinity of the Property are Waiakea Stream, located approximately 500 feet northwest of the Property, and Waiakea Pond located approximately 1.2 miles northeast of the Property. Waiakea Stream ultimately discharges to Waiakea Pond.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community Panel 1551660880C, the Property is located outside of the 100-year floodplain. Figure 8 in Appendix A provides a map depicting the extents of the nearest 100-year floodplain in relation to the Property.

2.4.2 Hydrogeological Characteristics

According to information acquired from the Soil Conservation Service's Soil Survey for the Island of Hawaii, specific types of soil at the Property are from the Papai and Keaukaha Series. The Papai and Keaukaha Series are both listed as organic soils overlying basalt lava flows at shallow depth.

The surface soils are generally well- to excessively drained stony organic soils that form a thin veneer over underlying lava flows. These soil types have high infiltration rates and are characterized as subangular, blocky, friable, slightly plastic soils typically in moderately sloping areas and having minimal erosion potential. In a typical profile, the soil layer is up

to 8 inches thick and is a stony brown muck. Basalt lava flows associated with flank eruptions of Mauna Loa Volcano are present beneath the soil, and range from clinkery a'a to ropy pahoehoe. Surface soils typically mimic the topographic profile of the underlying lava flows.

The basal aquifer beneath the site is expected to be present within flank lavas of Mauna Loa Volcano at a depth of approximately 100 feet below ground surface. Groundwater within the unconfined basal aquifer is classified as fresh water, currently used as a drinking water source, irreplaceable, and moderately vulnerable to contamination (Mink and Lau, 1993). Based on available data, it is assumed that groundwater generally flows to the north-northeast towards Hilo Harbor.

2.5 Site Utilities

Water Service—The County of Hawaii Department of Water Supply provides potable water service to the Property.

Sanitary Sewer System—The County of Hawaii provides sanitary sewer service to the Property. The primary source of wastewater that is directed to the sanitary sewer system includes nonprocess wastewater (bathrooms, sinks, etc.).

Gas and Electric—Natural gas is provided by a local provider, and electric service is provided by Hawaiian Electric Light Company.

2.6 Water Supply Wells and Septic Systems

Based upon a review of available historical site and agency records and interviews with site personnel, there are no water supply wells located currently or historically at the Property. Potable water is supplied by the County of Hawaii.

Before sanitary sewer lines were extended to the Property, the buildings were serviced with a cesspool. Although no design records were available for review, it is inferred that the system was designed for a normal sewage load from the facility restrooms. It is unknown whether oils and greases, cleaning solvents, or other chemicals may have been directed from the floor drain in the vehicle maintenance shop to the cesspool prior to its disconnection.

The County of Hawaii Wastewater Division installed sanitary sewer lines approximately 2 years ago, and all buildings on the Property have been connected since that time. Facility personnel indicated that the cesspool was backfilled and closed in place. No documentation of the cesspool closure activities was available for review.

A search of federal and state water well databases identified one water supply source located approximately 0.75 mile northeast of the Property. The well is one of the County of Hawaii's municipal water supply wells servicing the Hilo District, and is located topographically downgradient of the Property.

3 Site History

3.1 History of Ownership

The land on which the facility is built is owned by the U.S. Government. It was purchased from the State of Hawaii in 1962. A clause in the deed stipulates that the title, right of possession, and all other rights transferred by the Property deed shall automatically revert to the State of Hawaii in the event the U.S. Government does not use the Property for a period in excess of 3 consecutive years for the training of Reserve Components of the Armed Forces. Prior to the Hawaii State Government, the Property was owned by the Territory of Hawaii. The Territory of Hawaii acquired title to the Property prior to 1940, and leased the Property to Waiakea Mill Company in 1943.

The land deed for the Property, dated 1962 upon purchase by the U.S. Government, and the Chain of Title Report, dating back to 1940, are included in Appendix C. The Chain of Title Report did not identify any environmental liens against the Property.

A review of aerial photographs indicates that the site was undeveloped prior to the construction of the facility.

3.2 Past Uses and Operations

In 1962, the U.S. Government purchased the 3.7 acres of land for construction of the USAR Center. Construction records for the facility were not available for review.

The Property primarily functioned as an administrative, logistical, educational, and vehicle maintenance and storage facility. Administrative functions, classroom education, and weapons storage were conducted at the administration building. Larger meetings and mess hall activities were conducted in the assembly hall. Maintenance of military vehicles was conducted at the vehicle maintenance shop and vehicle maintenance garage, and military vehicles and equipment were stored at the motor pool and MEP area. The Property was historically used by reservists for drill activities on various weekends throughout the year. The 411th Engineer Battalion (Combat Heavy) is the current occupying unit at the USAR Center. The mission of this unit is to provide critical engineer support in the Forward Theater of Operations. At the time of the site reconnaissance, the administration building contained various items, including desks, office furniture, and folding tables, athletic equipment, and a weapons storage vault.

The assembly hall was used as a meeting and mess hall, for kitchen activities, and as a supply storage location. At the time of the site reconnaissance, the assembly hall contained various mission equipment including generators, water supply containers, sleeping cots, kitchen utensils and cookware, computer equipment, and cleaning supplies for the kitchen.

The vehicle maintenance shop, vehicle maintenance garage, and vehicle motor pool garage, which compose the AMSA subshop, were used to perform maintenance activities on military equipment. Activities inside the vehicle maintenance shop and vehicle maintenance

garage involved preventative maintenance checks, including checking vehicle fluids such as motor oil, water, and antifreeze, and light to heavy maintenance activities.

According to the 9th Regional Readiness Command (RRC) Environmental Manager, vehicle washing would have historically occurred at the original wash rack, located west of the vehicle maintenance shop adjacent to the southeast corner of the vehicle motor pool garage. This area is now covered with pavement and bordered by a paved access road area to the south and a grassy area to the north. A former grease rack was located adjacent to the east side of the vehicle maintenance shop. The area is now grassy and bordered to the east by the paved POV parking area. No details regarding the operation of the former grease rack were available.

At the time of the site reconnaissance, the vehicle maintenance shop contained a parts washing station, a battery storage area with six vehicle batteries stored on a secondary containment pallet, and a fenced enclosure for storage of parts and equipment. One floor drain is present near the part washing station. Facility personnel do not know where the drain discharges; however, facility personnel stated that wastewater from the facility was formerly routed to the cesspool. The vehicle maintenance shop contained desks and office equipment. The vehicle maintenance garage contained wheeled military vehicles, hydraulic lift jacks, and various tools and equipment.

Adjacent to the vehicle maintenance garage is the hazardous waste storage area and flammables locker. Hazardous waste materials including solvents, used oil, and transmission fluid were stored in the hazardous materials storage area. New motor oil, transmission fluid, paints, solvents, and other POL were stored in 55-gallon and smaller containers within the flammables locker. At the time of the site reconnaissance, used oil and transmission fluid were stored within the hazardous materials storage area. New motor oil, transmission fluid, lubricating oil, paint, and degreasers were stored in the flammables locker.

The vehicle motor pool garage is located west of the vehicle maintenance shop and used for vehicle storage and maintenance activities. At the time of the site reconnaissance the motor pool contained various wheeled military vehicles.

The MEP area is located north of the vehicle maintenance garage, and has been used for storage of military vehicles and equipment. At the time of the site reconnaissance, various wheeled military vehicles and other equipment were stored in the MEP area.

Historical aerial photographs and topographic maps, and information provided by facility personnel during the site reconnaissance were the primary source of information on the past use and operations at the Property. Figures 7 and 9 through 15 in Appendix A provide USGS topographical maps and aerial views of the Property and surrounding areas in 1949, 1963, 1977, 1981, 1992, 1995, 2003, and 2005.

The 1949 aerial photograph (Figure 9, Appendix A) shows that there are two buildings located adjacent to the west edge of Property. West Lanikaula Street is constructed in its current configuration south of the Property. The entire area of the Property is undeveloped and is covered with dense vegetation and trees.

In the 1952 aerial photograph, the Property remains vacant and undeveloped. No significant visible construction has occurred on adjacent land parcels.

In the 1963 USGS topographical map (Figure 10, Appendix A), the Property remains vacant and undeveloped. No significant visible construction has occurred on adjacent land parcels.

The 1977 aerial photograph (Figure 11, Appendix A) shows that vegetation has been cleared from the Property, and one building is located in the south-central portion of the Property. The building is located in the current location of the assembly hall. Some vegetation remains in the northern portion of the Property.

The 1981 USGS topographical map (Figure 12, Appendix A) shows that the Property layout is relatively unchanged from the 1977 aerial photograph.

The 1983 aerial photograph shows that additional buildings have been constructed on the Property. The buildings appear to be the vehicle maintenance shop, assembly hall, and administration building.

The 1992 aerial photograph (Figure 13, Appendix A) shows that the Property is relatively unchanged from the 1983 aerial photograph. Adjacent property to the south, the University of Hawaii at Hilo campus, has been expanded and additional buildings built within the campus area.

The 2003 aerial photograph (Figure 14, Appendix A) shows that the Property and properties within the immediate vicinity are unchanged since 1995.

The 2005 aerial photograph (Figure 15, Appendix A) shows the Property as it currently exists. The three main buildings, and the vehicle maintenance garage and vehicle motor pool garage are visible.

3.3 Past Use, Storage, Disposal, and Release of Hazardous Substances

3.3.1 Past Use and Storage of Hazardous Substances

Information related to the past use and storage of hazardous substances at the Property was compiled through review of available site records, search of federal and state environmental databases, and interviews with USAR personnel. Hazardous substances and POL have been stored and used at the USAR Center associated with vehicle and facility maintenance activities, and janitorial services. Janitorial chemicals and building maintenance-related products were stored in the designated storage area within the janitorial closets located in the administration building and in the kitchen at the assembly hall. Vehicle maintenance products and new POL products were stored within the vehicle maintenance shop. POL products and other hazardous materials were stored in the waste storage area near the vehicle maintenance garage and in the outdoor hazardous material storage shed located adjacent to the vehicle maintenance garage.

Hazardous substances and POL stored include lead-acid batteries, acids, adhesives, solder, lubricating oils, new and used motor and transmission oil, parts cleaning solvents, antifreeze, brake fluid, paints, paint thinner, mineral spirits, and halogenated solvents. An

inventory of the substances listed in historic facility documents from 1995 is included in Table 1. Based on the quantities documented in available historical hazardous materials inventories, none of the substances were stored in volumes exceeding CERCLA reportable quantities.

TABLE 1
Historic Hazardous Materials and POL Inventory
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

NSN	Nomenclature	Quantity (pounds)
9150001866668	Motor Oil 10W	222.68
9150001896729	Motor Oil 30W	743.0
9150010355394	80/90 Oil	224.93
6850001817940	Antifreeze, Ethylene Glycol, Inhibited	559.98
9150011233152	Brake Fluid	8.09
9150006574959	Dextron II	106.34
9150011977692	Grease	1.47
8010002970593	Primer coat	4.51
6810008431640	Sulfuric acid	918.43
8010005587026	Thinner paint	25.35
8010005587026	Regular mineral spirits	No data[a]
8010002970593	So Sure yellow primer 84-331	No data[a]

Note: Circa 1995
[a] No quantities were reported in the documentation provided
NSN = U.S. Department of Defense National Supply Number

3.3.2 Past Disposal and Release of Hazardous Substances

Information related to past disposal and potential release of hazardous substances at the Property was compiled through review of available site records, search of federal and state environmental databases, and interviews with USAR personnel.

The concrete floor beneath the stored batteries was etched, indicating a release of battery acid (typically concentrated sulfuric acid containing dissolved lead and other metals) occurred (Photo 2). Additionally, stressed vegetation was observed during the August 2006 site reconnaissance outside the door of the battery storage area (Photo 1), indicating that released acids migrated out of the storage room and across a concrete sidewalk into a grassy area.

3.4 Past Presence of Bulk Petroleum Storage Tanks

Based upon a review of available site records, a search of federal and state environmental databases, and interviews with USAR personnel, no underground storage tanks (USTs) or aboveground storage tanks (ASTs) were currently or formerly located at this facility.

There are historic records of storage of fuel supply trucks within the MEP area that were used to store diesel fuel (416th Engineering Command [ENCOM] Engineer Support Group [ESG], 1996).

Releases of small quantities of POL products have been documented, including approximately 20 gallons of lubricating oil near the existing wash rack. Facility personnel indicated that the affected soil was excavated and disposed of offsite (9th RRC Environmental Manager, 2006). Because the release was less than 25 gallons, it was not required to be reported under Hawaii State Law. The 9th RRC Environmental Manager indicated that no report documenting the clean up was prepared because the release was below the 25-gallon threshold.

The former wash rack drained, without adequate treatment, into the adjacent soil. In preparation for replacing the wash rack, a memorandum for the record states that significant soil contamination could be encountered during removal of the existing wash rack (USACE, 1995). It is unknown if contaminated soil was encountered or remediated during wash rack replacement.

During the site reconnaissance, stains resulting from POL releases from military vehicles were observed at the MEP area, the vehicle maintenance garage, and the vehicle motor pool garage. Evidence of a release of POL (Class III diesel fuel leak or small spill) from a Tank and Pump Unit was noted as a finding in the Total Facility Assessment Report completed in 1996. Surface runoff from the vehicle motor pool garage generally flows to the MEP area. Facility records indicate that historic releases of POL from military vehicles resulted in chemical concentrations in stormwater runoff above allowable limits established in the stormwater protection plan (Total Facility Assessment Report, 1996). In addition, historic records indicate that a build up of oily sludge was observed at the MEP stormwater discharge point, and a 2002 Safety Assessment Report indicated that surface runoff in the rear of the motor pool had evidence of POL contamination and was in violation of 40 CFR (PO.015.002.R). Therefore it is possible that POLs have impacted the environment at the MEP stormwater discharge point.

3.5 Review of Previous Environmental Reports

A review of site records produced several reports pertaining to the Property. The following subsections provide a brief summary of these reports. Copies of the reports, unless otherwise specified, are provided in Appendix D.

3.5.1 1994 Paint Chip Samples Report

This report presents locations and analytical report findings for paint chip samples collected at the facility during 1994. Paint chip samples were analyzed for the presence of lead. LBP was detected at several locations within the facility (Unknown Author, 1994).

3.5.2 1994 Asbestos Survey, Kunieda U.S. Army Reserve Center

This report presents locations and analytical report findings for material samples collected at the administration building, assembly hall, and vehicle maintenance shop. Samples were analyzed for the presence of asbestos. Asbestos-containing material (ACM) was identified at locations within the administration building (floor tiles) and the vehicle maintenance shop (concrete floor joint sealer) (Navy Public Works Center, 1994; Total Facility Assessment Report, 1996). The report also indicates that none of the ACM detected was friable.

3.5.3 1994 Facility Re-Evaluation Report

This report presents the findings of an overall evaluation of the facility conducted in 1994. Included in the report is an evaluation of the environmental compliance procedures at the facility. The report identified several environmental compliance issues, including the potential for discharge of POL pollutants to a storm drain near the former wash rack, accumulation of oil on standing water in a plugged drain at the former wash rack, and photographs of a grassy area near earth-moving equipment with the caption "diesel fuel spill" (ENCOM ESG, 1994). No further details about these items were provided in the report.

3.5.4 1995 Design Analysis, Replace Wash Rack, Install Oil/water Separator, and Ventilation Fans

A design analysis report was prepared documenting the specifications of a project to replace an existing wash rack, which drained without adequate treatment, into the adjacent soil, with a new wash rack and oil/water separator. A memorandum for the record is included in this report that indicates significant soil contamination could be encountered during removal of the existing wash rack (USACE, 1995).

3.5.5 1996 Total Facility Assessment Report

This report presents the findings of a total facility assessment completed during 1996. One section of the report outlines findings related to environmental compliance issues. The only environmental compliance-related findings in the report were related to potential discharge of POL to the Waiakea Stream via stormwater near the wash rack and MEP area, and the known presence of ACM at the facility (Total Facility Assessment Report, 1996).

3.5.6 1997 Pollution Prevention Plan Section 6—Maintenance Process Description

This report describes the processes used during routine maintenance activities to prevent discharge of pollutants. It also provides data on the volume and types of hazardous materials used or stored at the facility during 1995 (Unknown Author, 1997).

3.5.7 2000 Environmental Compliance Assessment Report

This report presents the findings of an environmental compliance assessment conducted in 2000. The report identified one environmental compliance issue, which was discharge of pollutants via stormwater runoff at the MEP and motor pool parking areas. Oil was observed dripping from vehicles or being released from oil drip pans with accumulated

water, which was then transported via stormwater to the grassy topographic lows at the north and northeast edges of the MEP area. The report indicated evidence of "oil sludge" accumulation in the vegetated areas where runoff leaves the MEP area (416th ENCOM ESG, 2000).

3.5.8 2002 Environmental Compliance Assessment Report

This report presents the findings of an environmental compliance assessment conducted in 2002. The report identified two environmental compliance issues, one of which was drainage of oil onto the ground in the motor pool area resulting in POL contamination in surface runoff, and discharge of pollutants via stormwater runoff from the motor pool. The second compliance issue was the presence of a 55-gallon drum containing petroleum-contaminated soil near the wash rack. No further information was provided as to its source (416th ENCOM, 2002a and 2002b).

3.5.9 2002 State of Hawaii Department of Health Clean Water Branch Notice of Intent Form B, NPDES General Permit Coverage Authorizing Discharges of Stormwater Associated with Industrial Activities

This document is a copy of the National Pollutant Discharge Elimination System (NPDES) general permit application for the facility. It presents information about the facility, and laboratory analytical results for one stormwater sample collected during a storm event. The sample was analyzed for oil and grease, neither of which was detected at concentrations above the analytical method detection limit (9th Regional Support Command, 1998 and 2002).

3.5.10 2003 U.S. Army Reserve Stormwater Pollution Prevention Plan

This plan presents the details of the Best Management Practices employed at the facility to control or reduce pollution in stormwater discharges. The plan indicates the use of drip pans beneath vehicles stored at the facility to prevent POL drainage onto the ground surface, regular inspections of drip pans for the presence of oil, and emptying of drip pans into an oil/water separator system if they contain POL. It also suggests various measures to prevent surface runoff from industrial process areas from entering the storm drain (USAR, 2003).

4 Adjacent Properties

Adjacent property land uses are significant to the ECP process because current or past uses may have an environmental impact on the USAR Center. Adjacent properties were included in the EDR report review for this reason. Typically adjacent properties within 0.25 mile of the USAR Center boundaries are reviewed and visually surveyed. For the purposes of this ECP, the adjacent property reconnaissance was performed from the USAR Center boundaries and from public access points. Historical aerial photographs and topographic maps were also reviewed for conditions or activities that may have had an environmental impact on the Property.

4.1 Land Uses

Land located south of the USAR Center is used by the University of Hawaii at Hilo Campus. The campus comprises buildings used for classroom and laboratory studies, and for student housing. Land located east of the USAR Center is used by the YMCA. The YMCA operates a youth center within several structures on the Property. Land located west of the USAR Center is used by E Makaala School, which serves children in grades prekindergarten to third grade. Land located north of the USAR Center is undeveloped. Land use in adjacent lands farther from the facility range from residential, to commercial and industrial.

Table 2 summarizes the current immediate adjacent properties, their owners, and zoning. Figure 16 in Appendix A indicates the locations of these adjacent properties.

TABLE 2
List of Properties Adjacent to Minoru Kunieda USAR Center, Hilo, Hawaii
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

Name/Type of Property	Address	Distance and Direction from Property	Zoning[a]	Remarks
University of Hawaii at Hilo	200 W Kawili Street, Hilo HI 96720	Approximately 100 feet south	RS-10	Nine former USTs permanently closed. Releases reported, site cleanup completed. Conditionally exempt small quantity generator.
Young Men's Christian Association of the Island of Hawaii	300 West Lanikaula Street, Hilo HI, 96720	Approximately 50 feet east	RS-10	
E Makaala School	440 West Lanikaula Street, Hilo, HI 96720	Approximately 50 feet west	RS-10	

[a] RS-10 is classified as "Single Family Residential"

4.2 Findings

The EDR database search results were reviewed for any evidence that adjacent properties may have past or present environmental issues that would impact the USAR Center.

No reports of environmental issues were found for the YMCA or E Makaala School properties. Previous environmental issues were identified for the University of Hawaii at Hilo campus as well as for other properties within 0.5 mile of the facility.

Based on a review of available aerial photographs, land use at adjacent properties has not changed significantly since the construction of the USAR Center.

5 Review of Regulatory Information

An essential component of an ECP is the review of records and databases containing information on the Property and adjacent properties. The review includes reasonably obtainable federal, state, and local government records, and is intended to identify a release or likely release of any hazardous substance or any petroleum product that is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product to the Property.

The majority of the regulatory information for this ECP was obtained from EDR on July 12, 2006. EDR provides a regulatory database summary that consolidates standard federal, state, local, and tribal environmental record sources based on ASTM-recommended minimum search distances from the Property.

All findings reported in Sections 5.1, 5.2, and 5.3 below are from the EDR report unless otherwise noted. A copy of the complete EDR report is included in Appendix E. Figure 17 in Appendix A shows environmental sites identified within 0.5 mile of the Property.

5.1 Federal Environmental Records

5.1.1 Federal National Priorities List Sites within 1 Mile

USEPA maintains a record of the nation's worst uncontrolled or abandoned hazardous waste sites, known as the National Priorities List (NPL). Sites on the NPL undergo long-term remedial action under CERCLA. The USAR Center is not an NPL site, nor are any such sites located within 1 mile of the Property.

5.1.2 Federal Comprehensive Environmental Response, Compensation and Liability Act Information Systems Sites within 0.5 Mile

The CERCLA Information System (CERCLIS) contains data on potential hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the Act. CERCLIS contains sites that are either proposed to be or are on the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL.

The USAR Center is not a CERCLIS site and there are no CERCLIS sites located within 0.5 mile of the center.

5.1.3 Resource Conservation and Recovery Act Corrective Action Sites within 1 Mile

Resource Conservation and Recovery Act (RCRA) corrective action (CORRACTS) sites represent facilities that have generated or managed hazardous wastes and require corrective action. The USAR Center is not a CORRACTS site, nor are any such sites identified within 1 mile of the USAR Center.

5.1.4 RCRA Treatment, Storage, and/or Disposal Sites within 0.5 Mile

RCRA defines and regulates sites that transport or provide treatment, storage, or disposal (TSD) of hazardous wastes. The RCRA Information System (RCRIS) includes selective information on these sites.

The USAR Center is not a RCRIS-TSD site and there are no such sites located within 0.5-mile of the USAR Center.

5.1.5 Federal RCRA Small and Large Quantity Generators List within 0.25 Mile

Conditionally exempt small quantity generators are defined as facilities generating less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. RCRA small quantity generators are defined as facilities generating between 100 kg and 1,000 kg of hazardous waste per month. A facility generating more than 1,000 kg of hazardous waste or over 1 kg of acutely hazardous waste per month is defined as a large quantity generator.

The USAR Center is not listed in the EDR report as a RCRA-registered small quantity generator; however, facility personnel indicated that the facility is a conditionally exempt small quantity generator (9th RRC Environmental Manager, 2006). No RCRA violations are listed in available records for the USAR Center.

One adjacent property, Personal Touch Dry Cleaning, is listed as a RCRA-registered small quantity generator and located within 0.25 mile of the Center, approximately 1,320 feet northeast of the Property. No RCRA violations were noted for this site.

Two adjacent property owners are registered conditionally exempt small quantity generators. They are listed as follows:-

- University of Hawaii at Hilo is located greater than 0.25 mile from the USAR Center, southeast of the Property. One RCRA noncompliance violation was recorded for this site in 1998. The site achieved compliance in 1999.
- Hilo Quality Cleaners is located approximately 0.75 mile from the USAR Center, north of the Property. No RCRA violation was recorded for this site.

No large quantity generators are located within 0.25 mile of the USAR Center.

5.1.6 Federal Emergency Response Notification System List

The Emergency Response Notification System (ERNS) List maintains information on reported releases of oil and hazardous substances. The USAR Center is not on this notification list.

5.2 State and Local Environmental Records

Most of the information presented in this subsection was obtained from the EDR report. Additional information was also obtained from online database searches of the State of Hawaii Web site (http://www.hawaii.gov/health/environmental/waste/ust/data.html). Occasionally state and local agency personnel were interviewed by telephone to answer questions about any database issues.

5.2.1 State Lists of Hazardous Waste Sites within 1 Mile

The USAR Center is not on the Hawaii Department of Health (HDOH) list of hazardous waste sites.

There are 10 adjacent properties within 1 mile of the USAR Center listed as having a hazardous waste site.

- University of Hawaii at Hilo is located directly south of the center. The Auto Shop facility, which is located approximately 0.25 mile southwest of the USAR Center, is listed as the hazardous waste site on the campus. The current status of the site was recorded as an active screening site.
- USDA Forest Service PSW Experimental Station is located approximately 0.5 mile east of the Property. No specific details were available regarding a release at the site. The current status of the site was recorded as no further action (NFA).
- Hilo Shopping Center is located approximately 0.6 mile northeast of the Property. A nonregulated UST was removed from the site during 2004, and low concentrations of diesel fuel were detected in soil samples. The report lists the quantity released as less than 25 gallons. The current status of the site was recorded as an ongoing investigation.
- Sun Sun Lau Chop Suey House is located approximately 0.65 mile north of the Property. A nonregulated UST was removed from the site during 1997 and diesel-affected soil was detected. The affected soil was excavated and removed. The current status of the site was recorded as NFA with cleanup goals achieved.
- Excelsior Dairy is located approximately 0.75 mile northeast of the Property. A nonregulated UST was removed during 1999. No details were provided about a release from the UST. The current status of the site was recorded as an ongoing investigation.
- Hilo Quality Cleaners is located approximately 0.8 mile north of the Property. A diesel UST was removed during 1994 and diesel affected soil was encountered. The current status of the site was recorded as NFA with site cleanup completed.
- Hilo Quality Washerette is located approximately 0.8 mile north of the Property. During 1996, a nonregulated UST was removed and petroleum-contaminated soil was encountered. The affected soil was excavated and removed. The current status of the site was recorded as an ongoing investigation.
- Hilo Soda Works is located approximately 0.8 mile east of the Property. During 1996 one gasoline UST and one diesel UST were removed. Releases were detected, and remedial actions were taken. The current status of the site was recorded as NFA with site cleanup goals achieved.
- Larry's Kaiko'o Chevron is located approximately 0.85 mile northeast of the Property. In 2003, petroleum-impacted soil was encountered below a grease trap and in cesspool sediments during closures. Remedial actions were taken. The current status of the site was recorded as NFA with cleanup goals achieved.
- Hilo Mechanical, Inc. is located approximately 0.9 mile east of the Property. An UST release was reported in 1995. The current status of the site was recorded as NFA.

5.2.2 State-Registered Landfills or Solid Waste Disposal Sites within 0.5 Mile

The USAR Center does not have a solid waste landfill, incinerator, or transfer station within the Property boundaries.

No adjacent properties within 0.5 mile of the USAR Center have a solid waste landfill, incinerator, or transfer station.

5.2.3 State-Registered Leaking UST Sites within 0.5 Mile

In addition to information obtained from the EDR report, the HDOH maintains a database of leaking underground storage tank (LUST) sites. The USAR Center is not listed in the State LUST database.

However, within 0.5 mile of the USAR Center, three LUST sites in various stages of closure were identified. Table 3 summarizes information relative to the USAR Center, and provides the corrective action status.

Yamada Transfer, Inc. is listed as one of the orphan sites in the EDR report, and based on available information is located within 0.25 mile of the USAR Center. Additional information about the location of the Yamada Transfer site is provided in section 5.3. None of the other orphan sites with UST releases are located within 0.5 mile of the USAR Center.

TABLE 3
Leaking Underground Storage Tank Sites Within 0.5 mile of USAR Center
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

Company/Site	Address	Distance and Direction from Property	Regulatory Status	Elevation Relative to Property
University of Hawaii at Hilo	200 W Kawili St. HI 96720	Approx 1,742 feet south-southeast	Site Cleanup Completed	Lower
Hilo Radiator & Glass	1335 Kinoole St. HI 96720	Approx. 1,780 feet northeast	Site Cleanup Completed	Lower
Ken's Service Station	1698 Kilauea Ave. HI 96720	Approx. 2,300 feet southeast	Site Cleanup Completed	Lower
Yamada Transfer Inc.	573 Lanikaula St. HI 96720	Approx. 500 feet west	Cleanup initiated.	Higher

5.2.4 State-Registered UST Sites within 0.5 Mile

A review of the EDR report and the State of Hawaii UST database identified one active UST site within 0.25 mile of the USAR Center. Table 4 lists the site along with tank status. The USAR Center itself was not listed in the state UST database.

Three USTs are located at the Ken's Service Station. Two of the USTs contain gasoline while the remaining UST contains diesel fuel. The tanks range in size from 4,000 gallons to 12,000 gallons. These tanks were installed on December 1, 1998. No documented releases have occurred at this site.

TABLE 4
Nearby Underground Storage Tank Sites
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

Company/Site	Address	Distance and Direction from Property	Tank Status	Closure Status	Elevation Relative to Property
Ken's Service Station	1698 Kilauea Ave. HI 96720	Approx. 2,500 feet west-northwest	Three USTs currently active: • 12,000-gallon gasoline • 8,000-gallon gasoline • 4,000-gallon diesel	Three USTs Currently Active Four USTs permanently closed	Lower
University of Hawaii at Hilo	200 W Kawili St. HI 96720	1,700 feet southwest	All USTs permanently closed	Nine USTs permanently closed. Two listed under LUST list	

5.2.5 State Spills Incidents

The USAR Center is not listed on the Hawaii state petroleum spill list.

5.2.6 Records of Contaminated Public Wells within 0.5 Mile

The City of Hilo Water and Sewer Board does not own or operate any municipal water supply wells within 0.5 mile of the USAR Center.

5.2.7 Voluntary Remediation Program Sites within 0.5 Mile

The USAR Center is not listed in the Hawaii Brownfields Program (the successor to the Voluntary Cleanup Program). No sites located within 0.5 mile of the USAR Center are listed as being in the Hawaii Brownfields Program.

5.2.8 State Registered Bulk Fertilizer and Pesticide Storage Facilities within 0.25 Mile

The USAR Center is not registered with the state as a bulk fertilizer and pesticide storage facility. Additionally, no adjacent properties within 0.25 mile were registered as a bulk fertilizer and pesticide storage facility.

5.3 Unmapped Sites

Some sites within the databases EDR searches have the same zip code as the USAR Center, but no street address. These sites, known as unmapped or orphan sites, can not be mapped from the EDR results alone. Additional efforts described herein were made to locate these sites and assess their environmental importance to the USAR Center.

Using the mapping utility provided at maps.google.com, the locations of the orphan sites were identified and mapped. One of the sites listed in the EDR report, Yamada Transfer, Inc., is listed with a street address located within the corresponding ASTM search radius distance. Based on available data, the site address is located approximately 500 feet west of the Property; however, the location of this site could not be confirmed during the site reconnaissance. A driving (windshield) survey was conducted during the site reconnaissance, and the Yamada Transfer, Inc. site could not be located at the approximate street address listed in the EDR report. The facility appears to be closed or is not currently in operation. The Yamada Transfer, Inc. site was listed in the state LUST database, with the notation that site cleanup had been initiated. None of the other unmapped sites listed in the EDR are located within 0.5 mile of the USAR Center.

5.4 Summary of Properties Evaluated to Determine Risk to the Property

To summarize Subsections 5.1 through 5.3, 13 separate properties, near or adjacent to the USAR Center, were evaluated as potential risk properties to the Property. These adjacent properties evaluated were identified as a result of information obtained during area reconnaissance, interviews, and regulatory database searches, and are summarized below in Table 5.

Based on an evaluation of available site information and details concerning the properties listed in Table 5, only one of the sites evaluated has the potential of adversely affecting the environmental conditions at the USAR Center. Yamada Transfer, Inc. is listed as an ongoing LUST cleanup. Based on the distance and direction from the USAR Center, if significant contamination exists at the Yamada Transfer, Inc. site, there is potential for chemicals to migrate to the USAR Center. However, the date of the most recent status entry for the Yamada Transfer, Inc. site is September 1998, and the site could not be located during the site reconnaissance. It is possible that cleanup was completed and the facility closed, but the State database was not updated.

TABLE 5
Properties Evaluated for Potential Environmental Risks
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

Company/Site	Database	Elevation Relative to Property?	Potential Impact on the Property?	Comments
Yamada Transfer	LUST, UST	Higher	Unknown	LUSTs closed in 1998. Cleanup initiated. No further data available in LUST database.
University Of Hawaii at Hilo Auto Shop	FINDS, LUST, UST, SHWS	Lower	No	LUSTs closed in 1999 and 2000. Site cleanup completed. Distance and direction from the USAR Center indicate that COCs are not likely to migrate to the Property at levels requiring additional action.
USDA Forest	FINDS, SHWS	Lower	No	NFA issued in 1996

TABLE 5
Properties Evaluated for Potential Environmental Risks
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

Company/Site	Database	Elevation Relative to Property?	Potential Impact on the Property?	Comments
Service PSW Experimental Station				
Hilo Shopping Center	SHWS, LUST, UST, SPILLS	Lower	No	UST release of less than 25 gallons diesel fuel. Distance and direction from the USAR Center indicate that COCs are not likely to migrate to the Property at levels requiring additional action.
Sun Sun Lau Chop Suey House	SHWS, LUST, UST, SPILLS	Lower	No	Site cleanup completed, NFA issued.
Excelsior Dairy	FINDS, SHWS, SPILLS	Lower	No	UST release during 1999. Distance and direction from the USAR Center indicate that COCs are not likely to migrate to the Property at levels requiring additional action.
Hilo Quality Cleaners	RCRA Small Quantity Generator, SHWS, FINDS, LUST, SPILLS, UST	Lower	No	LUST cleanup completed in 1994. NFA issued.
Hilo Quality Washerette	SWHS, FINDS, SPILLS, LUST, UST	Lower	No	UST release during 1996. Distance and direction from the USAR Center indicate that COCs are not likely to migrate to the Property at levels requiring additional action.
Hilo Soda Works	SHWS, LUST, UST	Lower	No	LUST cleanup completed, NFA issued
Larry's Kaiko'o Chevron	SHWS, SPILLS, INST CONTROL, LUST, UST	Lower	No	Site cleanup completed, NFA issued.
A Personal Touch Dry Cleaning	RCRA Small Quantity Generator	Lower	No	No RCRA violations.
Hilo Radiator and Glass	FINDS, LUST	Lower	No	LUST closed in 1995. Site Cleanup Completed.
Ken's Service Station	UST, LUST	Lower	No	LUSTs permanently closed in 1998. Site cleanup completed in 1999

COC = chemicals of concern; FINDS = EPA Facility Index System; INST CONTROL = USEPA Sites with Institutional Controls; SHWS = State Hazardous Waste Sites (HDOH); SPILLS = Spills Release Notifications (HDOH)

6 Site Investigation and Review of Hazards

Findings documented in the following subsections are based on the August 1, 2006, site reconnaissance and information obtained from USAR personnel.

6.1 USTs/ASTs

There were no USTs or ASTs present on the Property during the site reconnaissance. Because the facility performed maintenance on heavy equipment, truck-mounted fuel tanks for diesel fuel storage, were periodically stored on the Property in the MEP area and maintenance was performed on the vehicles.

6.2 Inventory of Chemicals/Hazardous Substances

Records pertaining to hazardous substances and POLs were reviewed in addition to interviews and the site reconnaissance to develop the inventory for the Property.

Available records indicate that hazardous substances and POLs have been stored at this facility. There materials include batteries, acids, adhesives, solder, lubricating oils, motor oils, transmission oils, antifreeze, brake fluid, hydraulic fluids, compressed gases, including acetylene and oxygen, parts cleaning solvents, mineral spirits, paints, and degreasers.

A hazardous material storage shed was observed just west of the vehicle maintenance garage. Used motor oil was stored in 55-gallon drums located on containment pallets or within secondary containment in the storage shed at the time of the site reconnaissance (Photo 4). A flammables locker is located adjacent to the storage shed. Flammables including paints and various POL products were stored in the flammables locker (Photo 5). All containers were clearly marked, and the locker was equipped with a hollow base that serves as secondary containment.

Based on information provided by facility personnel, pesticides are applied periodically as needed at this facility by a licensed applicator.

An inventory of substances present in 2005 was provided by USAR Center personnel and is included in Table 6.

The former wash rack used to drain directly into adjacent soils. During the design of the new wash rack, it was noted that significant contamination could be encountered upon removal of the former wash rack (USACE, 1995). No documentation was available regarding any remedial response to releases at the former wash rack. No stains or other indications of releases were observed on the pavement at the approximate former wash rack location (Photo 6).

Stressed vegetation was observed during the August 2006 site reconnaissance adjacent to the sidewalk outside the door of the battery storage area (Photo 1). The concrete floor beneath the stored batteries and the adjacent sidewalk was etched, indicating that a release

of battery acid may have occurred and that released acids migrated out of the storage room, across the sidewalk, and into a grassy area, potentially impacting soil (Photo 2).

TABLE 6
2005 Hazardous Materials and POL Products Inventory
SFC Minoru Kunieda USAR Center, Hilo, Hawaii

NSN	Nomenclature	Quantity
6850-001817933	Antifreeze, 5 gallon	2
6850-006641403	Antifreeze/coolant, summer, 1 gallon	3
7930-010750776	Cleaning compound, solvent-detergent, 1 gallon	1
8010-002970547	Enamel black 37038, 1 gallon	2
8010-003487715	Enamel, aerosol, brown 30372, 1 pint	2
8010-005985464	Enamel alkyd lusterless, 1-gallon can	1
8010-006169181	Primer coating, aerosol, grey, 1 pint	3
8010-008489272	Enamel, aerosol, fast dry flat alkyd, olive drab 34088, 1 pint	2
8030-002312345	Corrosion preventive compound, hard film type, 1 gallon	1
8030-014147430	Inhibitor, rust, 55 gallon	3
9150-001912772	Lubricating oil, engine 10W, 55 gallon	1
9150-006982382	Hydraulic fluid, 1 quart	10
9150-00F033322	Gear oil-80W90, 5 gallon	1
9150-011029455	Brake fluid, silicone, 1 gallon BT	3
9150-011524117	Lubricating oil, engine, 1-quart Can	24
9150-011524119	Lubricating oil, engine, 15W40, 55 gallon	1
9150-011977692	Grease, automotive and artillery, 35 pounds	3
9150-011977693	Grease, automotive and artillery, 14 ounces	6
9150-HI0000013	Oil motor 15W40, 5 gallon	2
9150-HI0000014	Oil gear 80W90 CERTOP, 2.5 gallon	4
9150-HI0000015	Hydraulic fluid ATF, 1 quart	7
9150-HI0000016	Oil HYD RANDO HD 32, 5 gallon	4
9150-HI0000031	Lubricating oil eng 10W, 1 quart	8

NSN = U.S. Department of Defense National Supply Number

Additionally, during the site reconnaissance, stains resulting from de minimis POL releases from military vehicles were observed at the vehicle maintenance garage (Photo 7), and the vehicle motor pool garage (Photo 3). POL staining was also observed at the MEP area. A drip pan used to collect oil beneath military vehicles in the MEP area was observed to have been washed by stormwater down the asphalt drainage swale at the north perimeter of the

Property (Photo 8—note that the pan was removed before the photo was taken). Surface runoff from the vehicle motor pool garage generally flows to the MEP area. The discharge point for surface runoff is the same area described in historic facility documents where a build up of oily sludge occurred as a result of POL in runoff. The asphalt at the drainage swale appeared stained at the time of the site reconnaissance.

6.3 Waste Disposal Sites

Available records and interviews did not indicate the practice of onsite waste disposal other than through managed storage and offsite disposal, or through the sewer or septic systems. No waste disposal sites were observed during the site reconnaissance, nor were any signs of past onsite waste disposal (such as stressed vegetation or suspicious depressions in the landscape) observed.

6.4 Pits, Sumps, Drywells, and Catch Basins

Sanitary sewage from the facility was diverted to an onsite cesspool until municipal sewer service was established approximately 2 years ago. Facility personnel indicated that the cesspool was backfilled and closed. Typically, a facility that performs vehicle maintenance operations is required by the HDOH Underground Injection Control Branch (HDOH, 2006) to conduct sampling of sludge or soil at the bottom of the cesspool prior to closure to evaluate for the presence of chemicals. No cesspool closure report was available for review at the time of this investigation and no closure report was submitted to HDOH.

A grease trap was present outside the assembly hall kitchen at the time of the site reconnaissance (Photo 9). The grease trap was likely installed during the 1960s when the building was constructed. The grease trap consisted of a 4-foot-wide by 5-foot-long concrete holding tank, and connects to the drains and floor drains in the kitchen. The unit is serviced periodically as needed by a contractor.

Two storm drains are present at the USAR Center. One is located in the paved area fronting the south side of the vehicle maintenance garage, and drains to a discharge point near the property line at the northwest corner of the Property. A second storm drain is located in the POV area adjacent to the northeast corner of the assembly hall, which drains to a discharge point near the perimeter of the Property northeast of the building. No sludge or build up was visible in the storm drains during the 2006 site reconnaissance. Historic environmental surveys at the Property did not identify evidence of POL sludge or contaminants in the storm drains.

Stormwater runoff from the paved area near the south side of the vehicle maintenance shop flows over pavement to a grassy swale near the perimeter of the Property east of the building.

Stained asphalt pavement was observed near the storm drain at the south side of the vehicle maintenance garage (Photo 10), and near the south side of the vehicle maintenance shop (Photo 11).

Facility records indicate that historic releases of POL from military vehicles resulted in chemical concentrations in stormwater runoff above allowable limits established in the stormwater protection plan (Total Facility Assessment Report, 1996).

6.5 Asbestos-containing Material

A 1994 survey evaluation of ACM at this facility identified asbestos-containing floor tiles in the hallways of the administration building, the office in the assembly hall, and the office in the vehicle motor pool garage; and asbestos-containing floor joint sealant in the vehicle maintenance shop (Navy Public Works Center, 1994). Additional documentation indicates that the floor tiles were removed and replaced with non-ACM tiles, and the joint sealer was encapsulated with an overlay of non-ACM elastomeric joint sealant pending abatement at a later date (Photo 12) (Total Facility Assessment Report, 1996). The report also indicates that none of the ACM detected was friable.

6.6 Polychlorinated Biphenyl (PCB) Transformers and PCB Containing Equipment

The USAR Center receives power from the municipal power provider. No transformers were observed on the Property during the site reconnaissance. Power is provided to the facility via overhead transmission lines. Pole mounted transformers are present on the adjacent property to the west, and along West Lanikaula road to the south.

During the August 2006 site reconnaissance, fluorescent fixtures at the facility appeared to be new. Since most of the fixtures looked new, it is unlikely that there is any polychlorinated biphenyl (PCB)-containing equipment.

6.7 Lead-based Paint

A LBP survey was completed in 1994. Available data indicate that LBP was present in most or all of the buildings tested (Unknown Author, 1994). No details were provided on the condition of the paint at the time of testing. Paint observed at the time of the site reconnaissance was in average condition, with normal obsolescence and wear resulting from age.

6.8 Radon

The USEPA has classified the entire State of Hawaii as Zone 3, Low Potential (average concentration less than 2 picoCuries per liter of air [pCi/L]) for radon. Facility personnel indicated that radon surveys have not been conducted for the USAR Center (9th RRC Environmental Manager, 2006).

6.9 Munitions and Explosives of Concern

Based on a review of available records, the site reconnaissance, and interviews with USAR Center personnel, there are no indications that munitions and explosives of concern (MEC) are or were present at the Property. There are no firing ranges on the Property, and there is no evidence that a firing range existed on the Property historically. However, small arms and ammunition for the small arms are stored in a weapons vault.

6.10 Radioactive Materials

Based on a review of available records, the site reconnaissance, and interviews with USAR Center personnel, radioactive materials were present in equipment used on the Property, including testing and calibration equipment. No record of a radiological survey was available. There were no reports in available information indicating that a release of radioactive materials occurred.

7 Review of Special Resources

7.1 Land Use

The County of Hawaii's Planning and Zoning Department has designated this Property and surrounding properties as RS-10, Single Family Residential. The site is located in an area that is zoned primarily as single- or multifamily residential. Residences, educational facilities, and commercial businesses are present in the immediate vicinity of the USAR Center.

7.2 Coastal Zone Management

The Hawaii Office of State Planning, a division of the Department of Planning and Economic Development, is the lead agency for the Hawaii Coastal Management Program. Hawaii County manages the Coastal Management Program on the island of Hawaii. This Property is not included in the coastal zone management plan, nor is it in a coastal zone.

7.3 Wetlands

According to the U.S. Fish and Wildlife Service National Wetlands maps, and visual observations, no wetlands were observed on the Property, or on any adjacent properties.

7.4 100-year Flood Plain

A review of the FEMA digital Flood Hazard Area map indicates that the Property lies outside the 100-year floodplain. Figure 8 in Appendix A provides a map of the 100-year flood plain elevations located in the immediate vicinity of the Property.

7.5 Natural Resources

No natural resources surveys or mapping have included this Property and the adjacent properties. However, the developed nature of the area, the length of time this area has been developed, the small-acreage involved, and the results of the site reconnaissance indicate that it is unlikely any threatened or endangered plant or animal species, or any habitat critical to their survival, would occur at this location.

7.6 Cultural Resources

A Cultural Resources Management Plan is on file at the Army Reserve Headquarters in Hawaii. Facility personnel (9th RRC Environmental Manager, 2006) indicated that no sites meeting the criteria for inclusion as a designated site were identified for the USAR Center.

7.7 Other Special Resources

No other special resources were identified at the USAR Center or adjacent properties.

8 Conclusions

The following information was obtained after conducting an environmental record search including records for adjacent properties, reviewing available historical information, conducting interviews with knowledgeable parties connected with the Property or with state and local agencies, and conducting a reconnaissance of the Property and adjacent properties.

8.1 Review of Findings

Hazardous Substances. Hazardous substances pursuant to CERCLA §101(14) (42 United States Code §9601 (14)) were used and stored at the Property in amounts necessary to support vehicle and building maintenance activities. However, available information indicates that the quantities stored would not have exceeded corresponding CERCLA reportable quantities.

A cesspool was backfilled and closed in 2004. The HDOH Underground Injection Control branch establishes closure requirements for cesspools that receive motor vehicle waste, typically including environmental sampling, to assess whether petroleum or other chemicals were discharged to the cesspool. Information indicates a cesspool closure report was not submitted to HDOH. It is unknown whether chemicals were discharged to the cesspool, or whether this has affected soil or groundwater quality at the former cesspool location.

Lead-acid batteries have been stored at the facility. Etched concrete within the battery storage room, and on a concrete sidewalk adjacent to the door of the storage room indicate that acid released within the room migrated out of the room and across the sidewalk to a grassy area. Stressed vegetation adjacent to the etched concrete indicates that the acid has been released to the environment.

USTs/ASTs. No petroleum USTs or ASTs have historically been located on the Property. Nor are they currently located on the Property.

Non-UST/AST Petroleum Storage. Use and storage of petroleum products other than in USTs or ASTs has been conducted to support vehicle maintenance activities. Existing documentation indicates that releases of petroleum may have occurred at the former wash rack location because the former wash rack used to drain directly to adjacent soils (USACE, 1995). No report documenting the closure of the former wash rack was available. It is unknown whether releases at the former wash rack have impacted soil or groundwater at the former wash rack location.

Twenty gallons of lubricating oil were spilled in a grassy area near the current wash rack. Soil affected by the release of lubricating oil was excavated, removed, and disposed of offsite (9th RRC Environmental Manager, 2006). No records were available regarding sampling for the presence of petroleum-impacted soil at the former wash rack location.

During the site reconnaissance, minor POL staining was observed in the vehicle maintenance garage and vehicle motor pool garage, which drain to the MEP area and at MEP area. Surface runoff from the MEP drains to an asphalt drainage swale, which discharges into a vegetated area at the perimeter fence along the north property line. At the time of the site reconnaissance, an oil drip pan used to catch POL under a vehicle had been washed by stormwater from the MEP area and was present in the vegetated area at the end of the drainage swale, and the drainage swale appeared POL-stained. Previous environmental condition assessments at the facility noted that historic stormwater sampling results indicated contaminants were present at concentrations above "allowable" limits (416th ENCOM ESG, 1996). An environmental compliance assessment report completed in 2000 documented a build up of "oil sludge" in the vegetated area where stormwater exits the MEP area. Minor spills of POL from vehicles have occurred at the MEP area that could contribute to pollutant concentrations in stormwater runoff from this area, potentially resulting in POL-impacted soil at the stormwater discharge point (416th ENCOM ESG, 2000).

PCBs. No transformers were observed on the Property. The facility power is supplied by overhead electrical lines. Pole mounted transformers were observed on neighboring properties.

ACM. A 1994 survey evaluation of ACM at the USAR Center identified asbestos-containing floor tiles in the hallways of the administration building, the office of the assembly hall, and the office of the vehicle motor pool garage, and asbestos-containing floor joint compound in the vehicle maintenance shop (Navy Public Works Center, 1994). The floor tiles were removed and replaced with non-ACM tiles, and the joint sealer was encapsulated with an overlay of non-ACM elastomeric joint sealant pending abatement at a later date (Total Facility Assessment Report, 1996). The report also indicates that none of the ACM detected was friable.

LBP. A LBP survey was completed in 1994 (Unknown Author, 1994). Available data indicate that LBP was present in most or all of the buildings tested (Unknown Author, 1994). No details were provided on the condition of the paint. Paint observed at the time of the site reconnaissance was in average condition, with normal obsolescence and wear resulting from age.

Radiological Materials. Based on a review of available records, the site reconnaissance, and interviews with USAR Center personnel, radioactive materials were present in equipment used on the Property, including testing and calibration equipment. No record of a radiological survey was available, and there were no evidence of a release of radioactive materials.

Radon. USEPA has classified the entire State of Hawaii as Zone 3—Low Potential (average concentration less than 2 pCi/L) for radon. Because this is below the USEPA-recommended action level of 4 pCi/L, no radon survey has been conducted at the USAR Center.

MEC. Available records indicate that no MEC are present at the facility. Small arms and ammunition for the small arms have been stored at the facility.

Surrounding Properties. Potential environmental sites of concern, located within the ASTM search radius distance from the Property, were evaluated through database review and site

reconnaissance. With the exception of the Yamada Transfer, Inc. site, none of the adjacent properties evaluated exhibited environmental conditions that had or have the potential to adversely affect environmental conditions at the Property.

Limited information was available regarding the Yamada Transfer, Inc. site, and the most recent data record, dated in 1998, indicated that the site investigation was ongoing. If cleanup has been completed at this site, then it likely poses no potential adverse effect on environmental conditions at the Property. If significant contamination remains present at this site, there is potential for impact to the Property due to the distance and direction (based on the street address for the site listed by EDR and HDOH) from the USAR Center, and the relative higher elevation than the USAR Center.

Wetlands and Floodplain. According to the U.S. Fish and Wildlife Service National Wetlands maps, and visual observations, no wetlands were observed on the Property, or on any adjacent properties.

The Property is not located within a 100-year floodplain or within a coastal zone.

Threatened and Endangered Species. No natural resources surveys or mapping have been performed for the Property. However, the developed nature of the area, the length of time this area has been developed, the small-acreage involved, and the results of the site reconnaissance indicate that it is unlikely any threatened or endangered plant or animal species, or any habitat critical to their survival, would occur at this location.

Archaeological and Historical Resources. A cultural resource evaluation has been completed, and no sites were identified at the Property (9th RRC Environmental Manager, 2006).

8.2 Environmental Condition of Property

Findings of this ECP report were based on reasonably available environmental information, interviews with site and state and local personnel, review of previous environmental studies and federal and state databases and file information related to the storage, release, treatment, or disposal of hazardous substances or petroleum products. Results were also based on visual observations of the Property and adjacent properties.

In accordance with the Deputy Under Secretary of Defense Memorandum, *Clarification of "Uncontaminated" Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations,* dated October 21, 1996, the Property has been classified into one of seven property types. Based on the results of this ECP study, the Property has been assigned an overall DoD Environmental Condition Type 7.

9 References

Persons Contacted

- Ms. Sharon Kuniyoshi, SFC Minoru Kunieda USAR Center, Facility Manager, 808-935-8463, August 1, 2006
- Mr. Wayne Mitsko, 9th Regional Readiness Command, Environmental Manager, 808-438-1600 x3247, August 1, 2006

Resources Consulted

- Aerial Photographs provided by RM Towill Inc, dated 1949, 1963, 1977, 1981, 1992, 1995, 2003, and 2005
- USEPA Map of Radon Zones, http://www.epa.gov/radon/zonemap.html
- FEMA Flood Hazard Insurance Map, http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView

Federal Databases

- National Priorities List (NPL) sites (USEPA, April 2006)
- Proposed NPL sites (USEPA, April 2006)
- NPL Deletions (Delisted NPL Sites) (USEPA April 2006)
- Federal Superfund Liens (NPL LIENS) (USEPA, October 1991)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (USEPA, February 2006)
- CERCLIS No Further Remedial Action Plan (USEPA, February 2006)
- Corrective Action Reports (CORRACTS) (USEPA, March 2006)
- Resource Conservation and Recovery Information System (RCRIS) (USEPA, March 2006)
- Emergency Response Notification System (ERNS) (USEPA, December 2005)
- Hazardous Materials Information Reporting System (U.S. Department of Transportation, December 2005)
- Engineering Controls Sites List (US ENG CONTROLS) (USEPA, March 2006)
- Sites with Institutional Controls (US INST CONTROL) (USEPA, March 2006)
- U.S. Department of Defense (DoD) Sites (USGS, December 2004)
- Formerly Used Defense Sites (USACE, December 2005)

- U.S. Brownfields (USEPA, April 2006)
- Superfund (CERCLA) Consent Decrees (U.S. Department of Justice, December 2004)
- Records of Decision (USEPA, April 2006)
- Uranium Mill Tailings Sites (U.S. Department of Energy, November 2005)
- Open Dump Inventory (USEPA, June 1985)
- Toxic Chemical Release Inventory System (USEPA, December 2003)
- Toxic Substances Control Act (USEPA, December 2002)
- Federal Insecticide, Fungicide, and Rodenticide Act/Toxic Substances Control Act Tracking System (USEPA Office of Prevention, Pesticides, and Toxic Substances, March 2006)
- Federal Insecticide, Fungicide, and Rodenticide Act Section 7 Tracking Systems (USEPA, December 2004)
- Integrated Compliance Information System (USEPA, February 2006)
- Polychlorinated Biphenyl (PCB) Activity Database System (USEPA, December 2005)
- Material Licensing Tracking System (U.S. Nuclear Regulatory Commission, April 2006)
- Mines Master Index File (U.S. Department of Labor, Mine Safety and Health Administration, February 2006)
- Facility Index System (FINDS)/Facility Identification Initiative Program Summary Report (USEPA, April 2006)
- Resource Conservation and Recovery Act (RCRA) Administrative Action Tracking System (USEPA, April 1995)
- Biennial Reporting System (USEPA National Technical Information Service, December 2003)

State of Hawaii Databases

- State Hazardous Waste Sites (SHWSs) List (HDOH, August 2005)
- Permitted Landfills in the State of Hawaii (Solid Waste Facilities/Landfill) (HDOH, May 2004)
- Leaking Underground Storage Tank Database (LUST) (HDOH, February 2006)
- Underground Storage Tank (UST) Database (HDOH, February 2006)
- Spills Release Notifications (SPILLS) (HDOH, August 2005)
- Sites with Institutional Controls (INST CONTROL) (HDOH, August 2005)
- Voluntary Cleanup Program Sites (HDOH, August 2005)

- Permitted Drycleaner Facility Listing (HDOH, May 2006)
- Brownfields Sites (HDOH, August 2005)
- List of permitted facilities in the state (AIRS) (HDOH, May 2006)

Tribal Records

- Indian Reservations (USGS, December 2004)

EDR Proprietary Historical Databases

- EDR Proprietary Manufactured Gas Plants (Manufactured Gas Plants) (EDR, Inc, July 12, 2006)
- EDR Proprietary Historic Gas Stations (EDR Historical Auto Stations) (EDR, Inc, July 12, 2006)
- EDR Proprietary Historic Dry Cleaners (EDR Historical Cleaners) (EDR, Inc, July 12, 2006)

Other Databases

- Oil/Gas Pipelines (USGS, 1994)
- Electric Power Transmission Line Data (PennWell Corporation, July 12, 2006)
- Sensitive Receptors (American Hospital Association, Centers for Medicare and Medicaid Services, National Institutes of Health, National Center for Education Statistics)
- Flood Zone Data (FEMA, 1999)
- National Wetlands Inventory (U.S. Fish & Wildlife Service, 2002 and 2005)

Physical Setting Sources

- USGS 7.5' Digital Elevation Model (USGS)
- Scanned Digital USGS 7.5' Topographic Map (USGS)
- Flood Zone Data (FEMA)
- National Wetlands Inventory (U.S. Fish and Wildlife Service, 2002)
- Aquiflow Information System (EDR proprietary database)
- Geologic Age and Rock Stratigraphic Unit
- State Soil Geographic Database (Department of Agriculture, Natural Resources Conservation Services)
- Soil Survey Geographic Database (Department of Agriculture, Natural Resources Conservation Services)
- Public Water Systems (USEPA Office of Drinking Water)

- Public Water Systems Violation and Enforcement Data (USEPA Office of Drinking Water)
- USGS National Water Inventory System (USGS)
- Groundwater Wells (State of Hawaii Department of Land and Natural Resources)

Radon Sources

- National Radon Database (USEPA)
- EPA Radon Zones (USEPA)

Other

- Airport Landing Facilities (Federal Aviation Administration)
- World Earthquake Epicenters, Richter 5 or Greater (National Oceanic and Atmospheric Administration)

Agencies Contacted

- Hawaii Department Of Health (HDOH), Underground Injection Control Branch, Honolulu, Hawaii

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416th ENCOM ESG—West. 2000. Draft Environmental Compliance Assessment Report. Prepared for Kunieda USAR Center FFID HI003, 470 West Lanikaula Street, Hilo, Hawaii, 96720-4038.

416th ENCOM, Facility Engineer Center—Southwest. 2002a. Project Report FY02-1: Environmental Compliance Assessment (ECAS) Safety Assessment Facility Condition Survey (FCS). Prepared for SFC Minoru Kunieda USARC, Hilo, 9th Regional Support Command.

416th ENCOM, Facility Engineer Center—Southwest. 2002b. Project Plan FY02-1: Environmental Compliance Assessment (ECAS) Safety Assessment Facility Condition Survey (FCS). Prepared for SFC Minoru Kunieda USARC, Hilo, 9th Regional Support Command.

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Navy Public Works Center, Long-range Maintenance Planning Branch. 1994. Asbestos Survey, U.S. Army Reserve Center, Hilo Hawaii. Pearl Harbor, Oahu, Hawaii.

U.S. Army Corps of Engineers (USACE). 1995. Design Analysis, Replace Washrack, Install Oil/Water Separator and Ventilation Fans, U.S. Army Reserve Center, Hilo Hawai.

U.S. Army Reserve (USAR). 2003. Storm-Water Pollution Prevention Plan (SWP3). Prepared for Kunieda U.S. Army Reserve Center, Ninth Corps Reserves, Hilo, Hawaii, U.S. Geological Survey, Water Resources, Honolulu, Hawaii.

Unknown Author. 1994. Paint Chip Samples, Hilo Hawaii. January.

Unknown Author. 1997. Pollution Prevention Plan Section 6.

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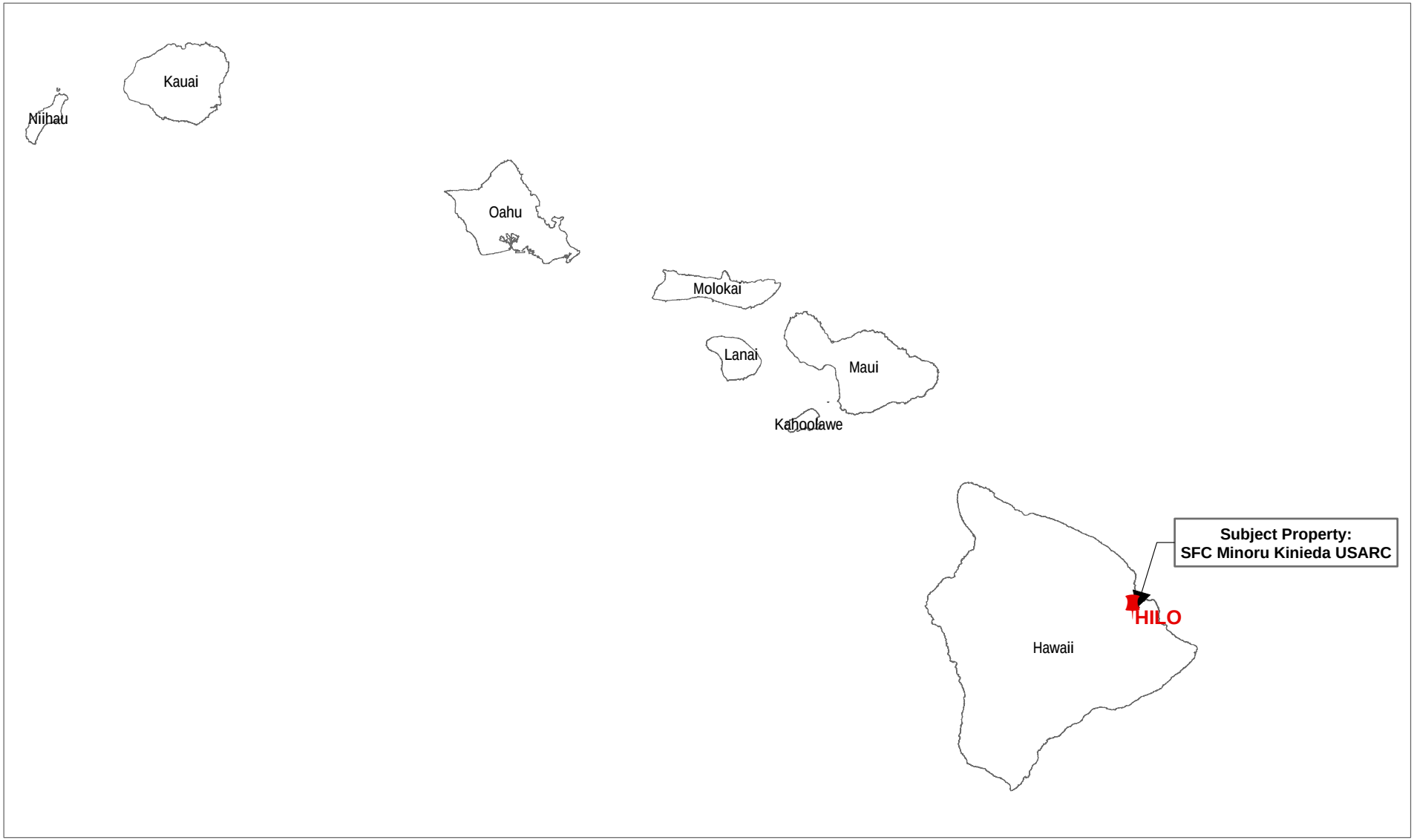
Deed No. S-19642, State of Hawaii Bureau of Conveyances, October 24, 1962

Soil Survey of the Island of Hawaii, State of Hawaii, United States Department of Agriculture Soil Conservation Service, December, 1973

Appendix A
Figures



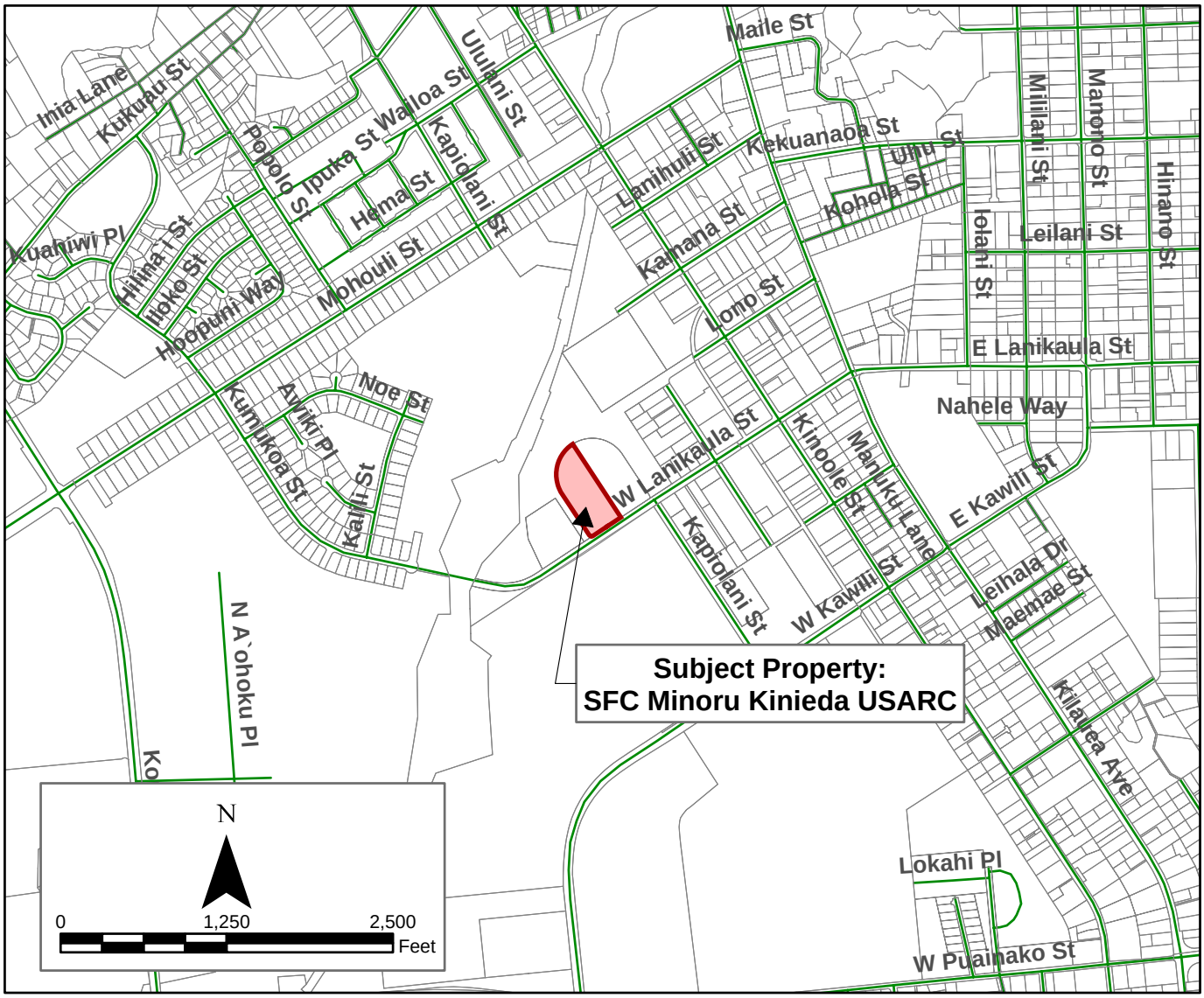
N

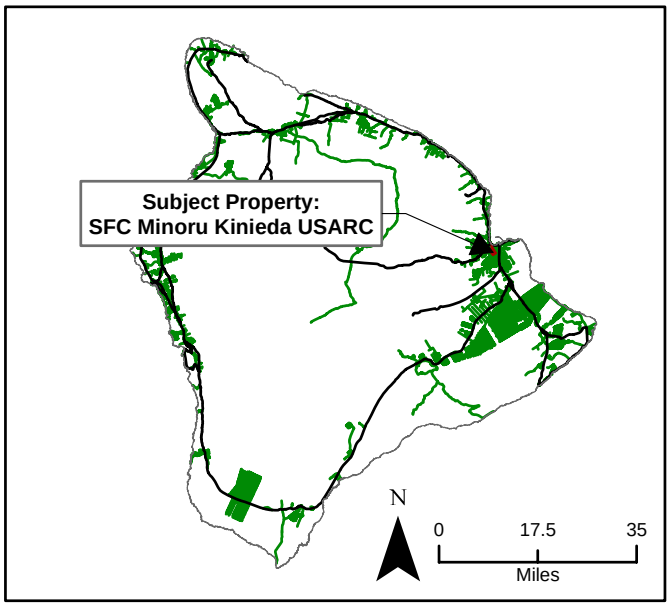
0 50 100 Miles

FIGURE 1

Site Vicinity
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL





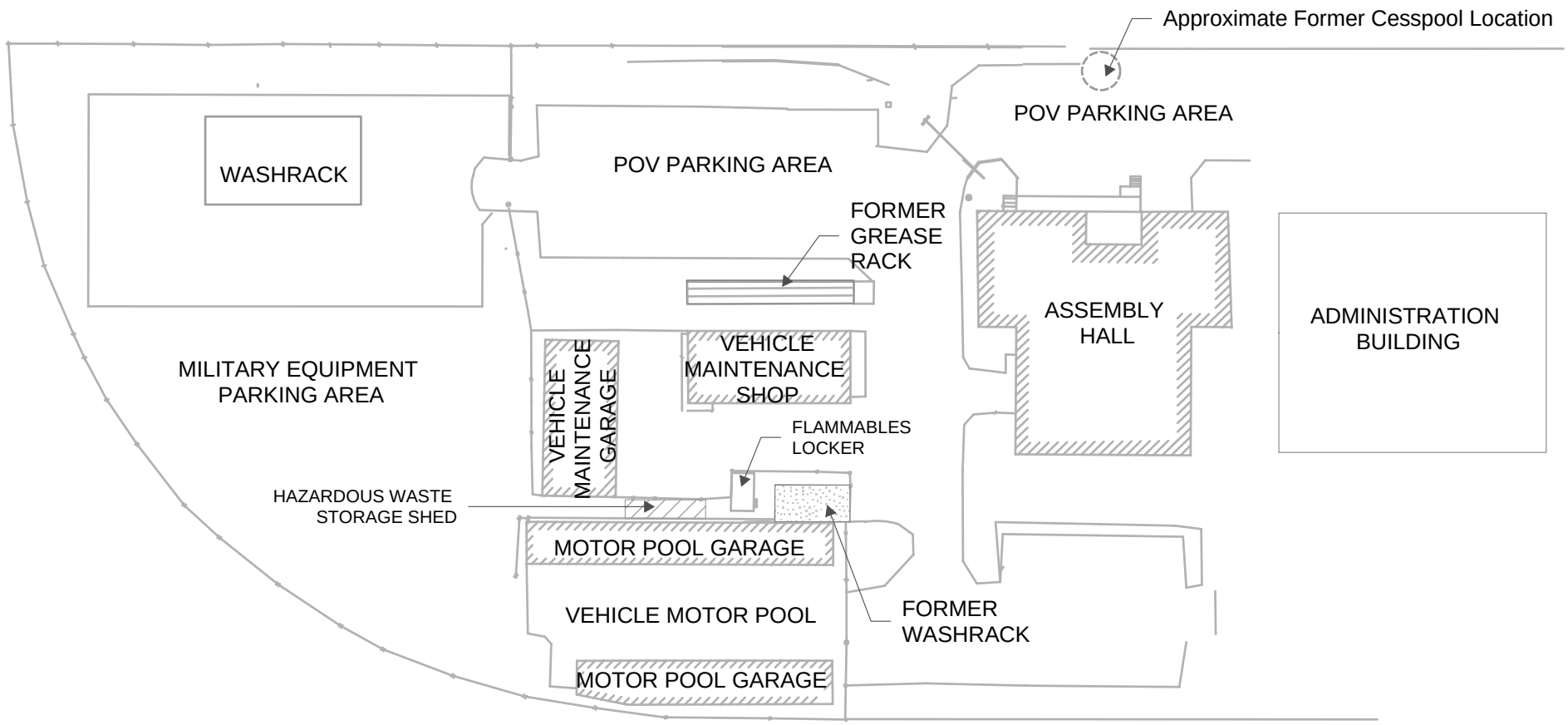
Legend:

- SFC Minoru Kunieda USARC
- Tax Map Key (parcel)
- Road

FIGURE 2

General Site Location Map
SFC Minoru Kunieda USARC

Phase 1 ECP Report



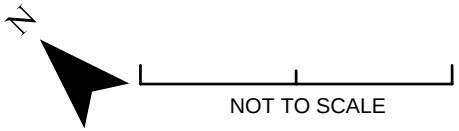
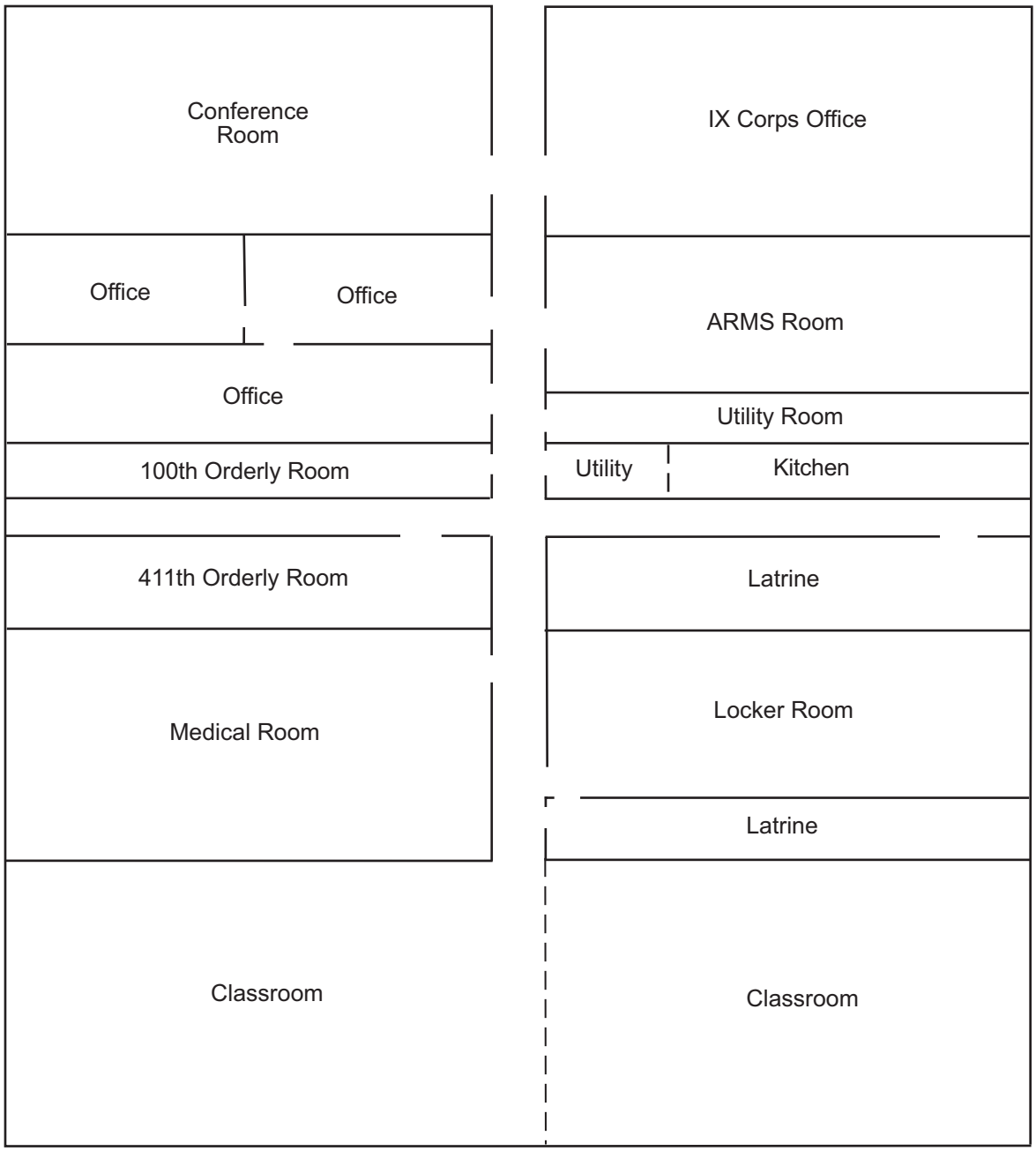


FIGURE 3

Site Layout Plan for
SFC Minoru Kunieda USARC

Phase 1 ECP Report

CH2MHILL



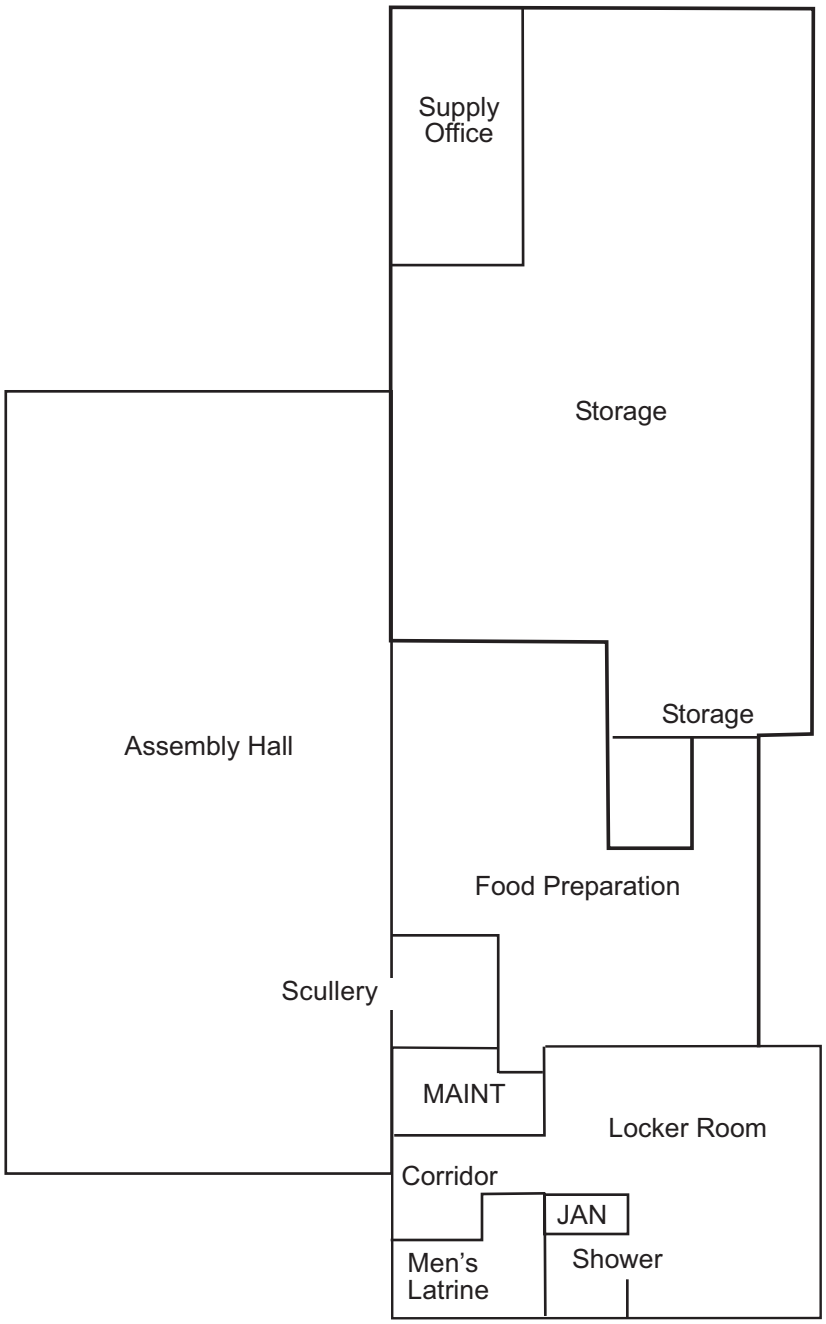
North

NOT TO SCALE

SOURCE: Facility Re-Evaluation, 416th Engineer Command, March 1994

FIGURE 4
Interior Layout, Administration Building
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



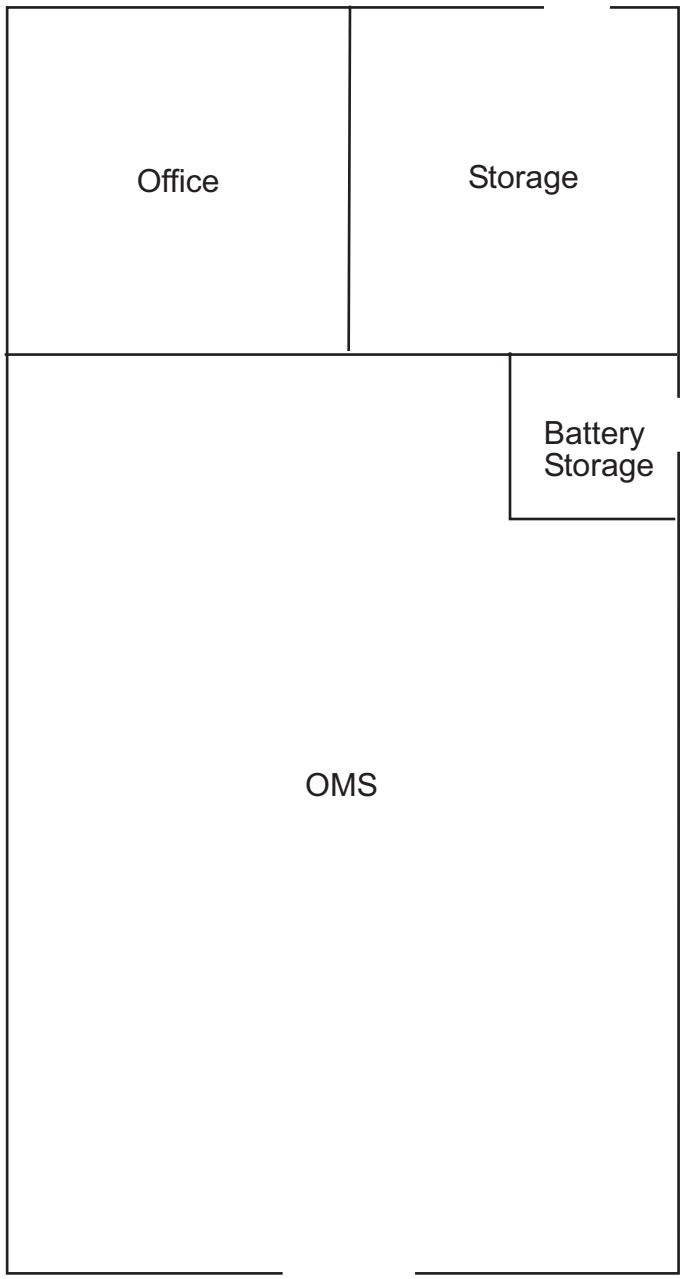
North

NOT TO SCALE

SOURCE: Facility Re-Evaluation, 416th Engineer Command, March 1994

FIGURE 5
Interior Layout, Assembly Hall
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



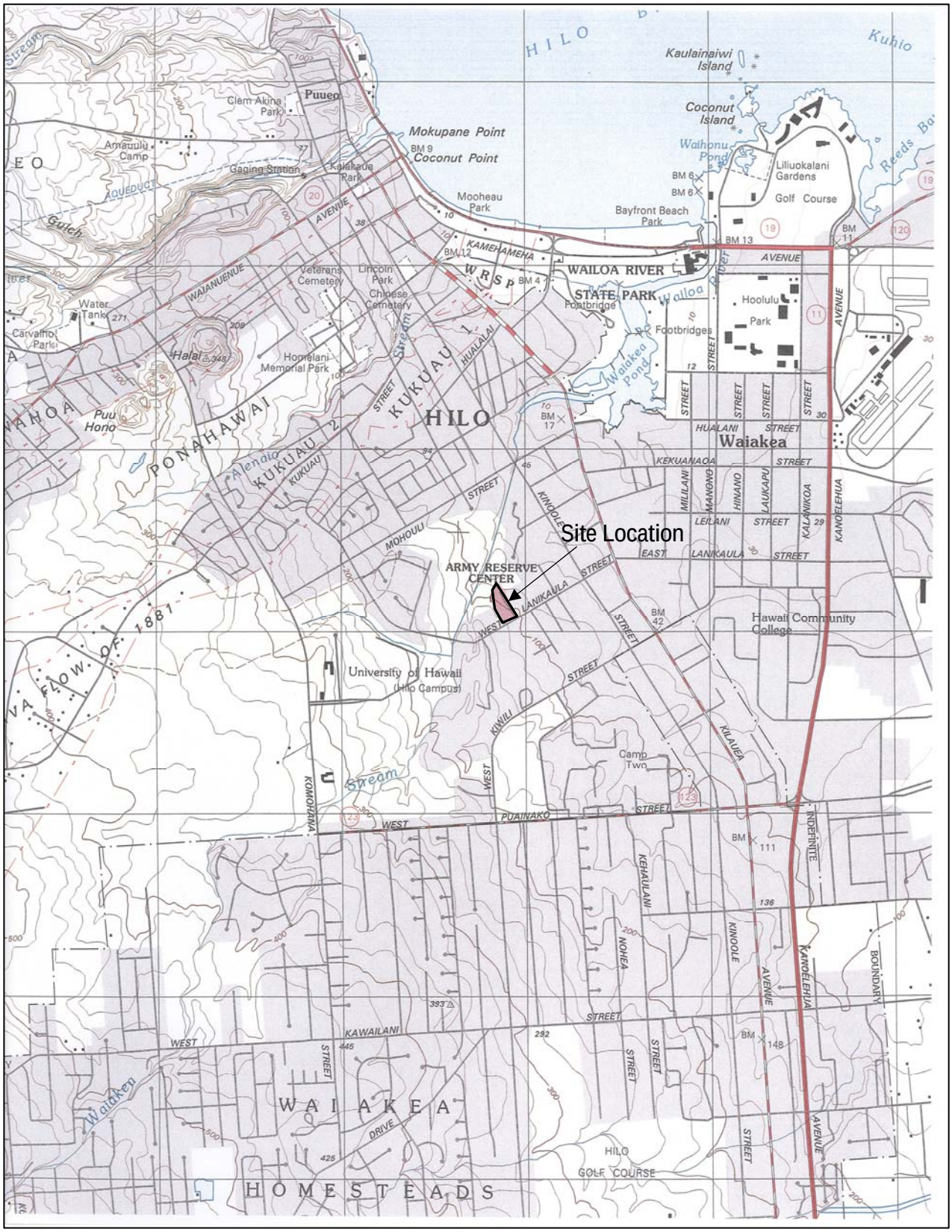
North

NOT TO SCALE

SOURCE: Facility Re-Evaluation, 416th Engineer Command, March 1994

FIGURE 6
Interior Layout, Vehicle Maintenance Shop
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



North

Not to Scale

SOURCE: EDR Historical Topographic Report, July 12, 2006

FIGURE 7
1995 USGS 7.5-Minute Topographic Map,
Hilo, Hawaii
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL

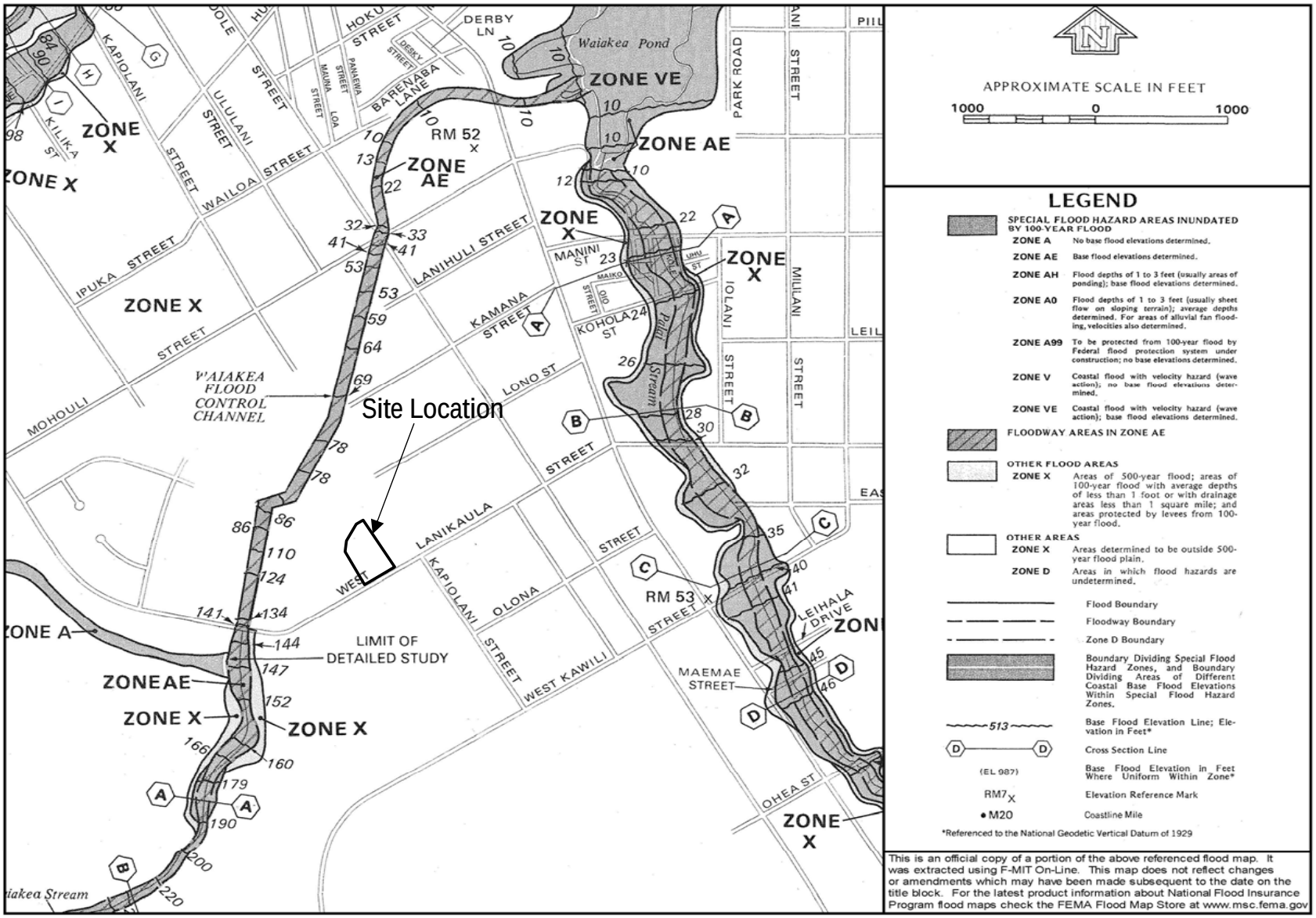


FIGURE 8

Flood Plain Map

SFC Minoru Kunieda USARC

Phase 1 ECP Report

SOURCE: Federal Emergency Management Agency, http://www.msc.fema.gov, September 16, 1988

CH2MHILL

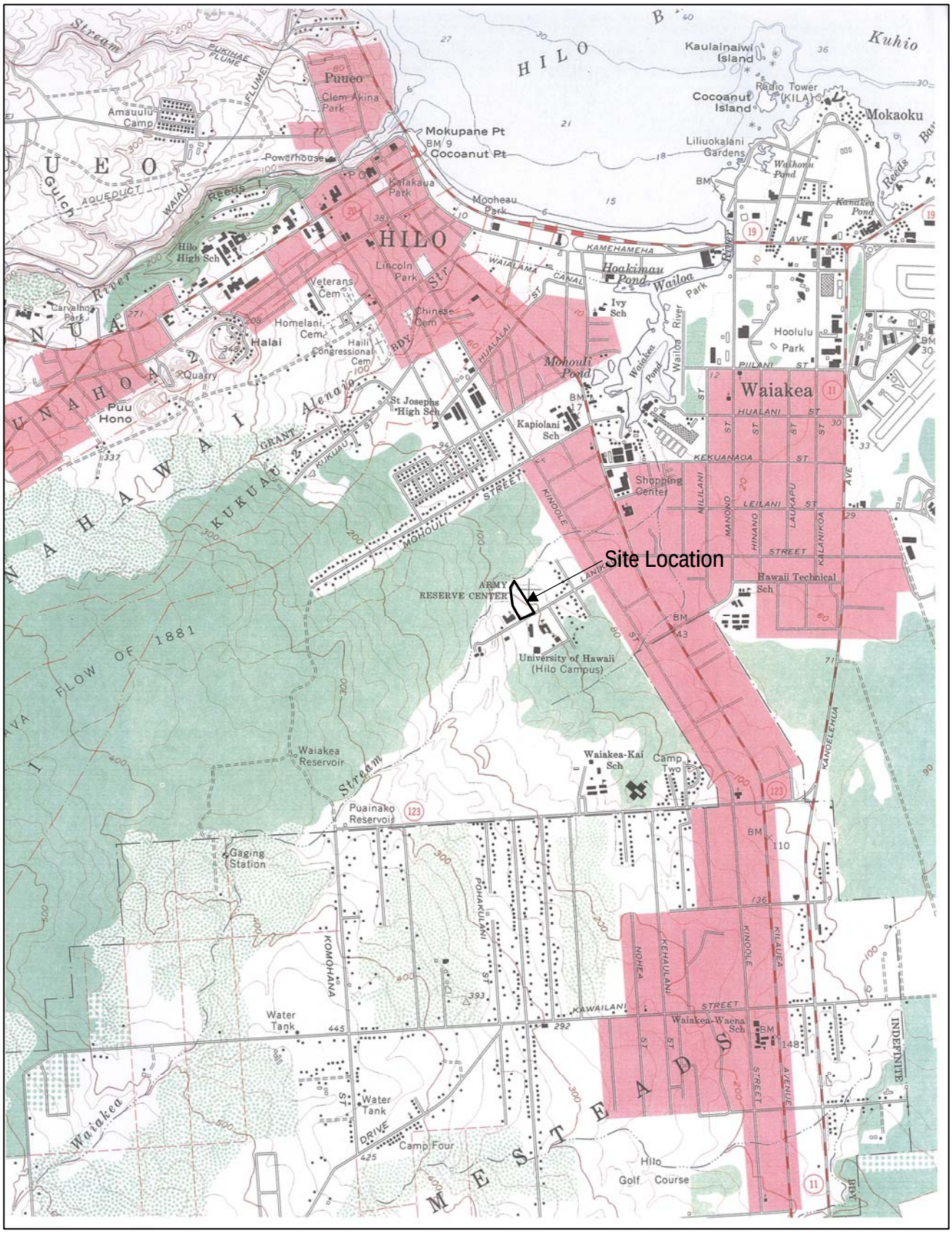
North

Not to Scale

SOURCE: R.M. Towill Corporation Survey and Photogrammetry Department.

FIGURE 9
1949 Aerial Photograph
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



North

Not to Scale

SOURCE: EDR Historical Topographic Report, July 12, 2006

FIGURE 10
1963 USGS 7.5-Minute Topographic Map,
Hilo, Hawaii
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL

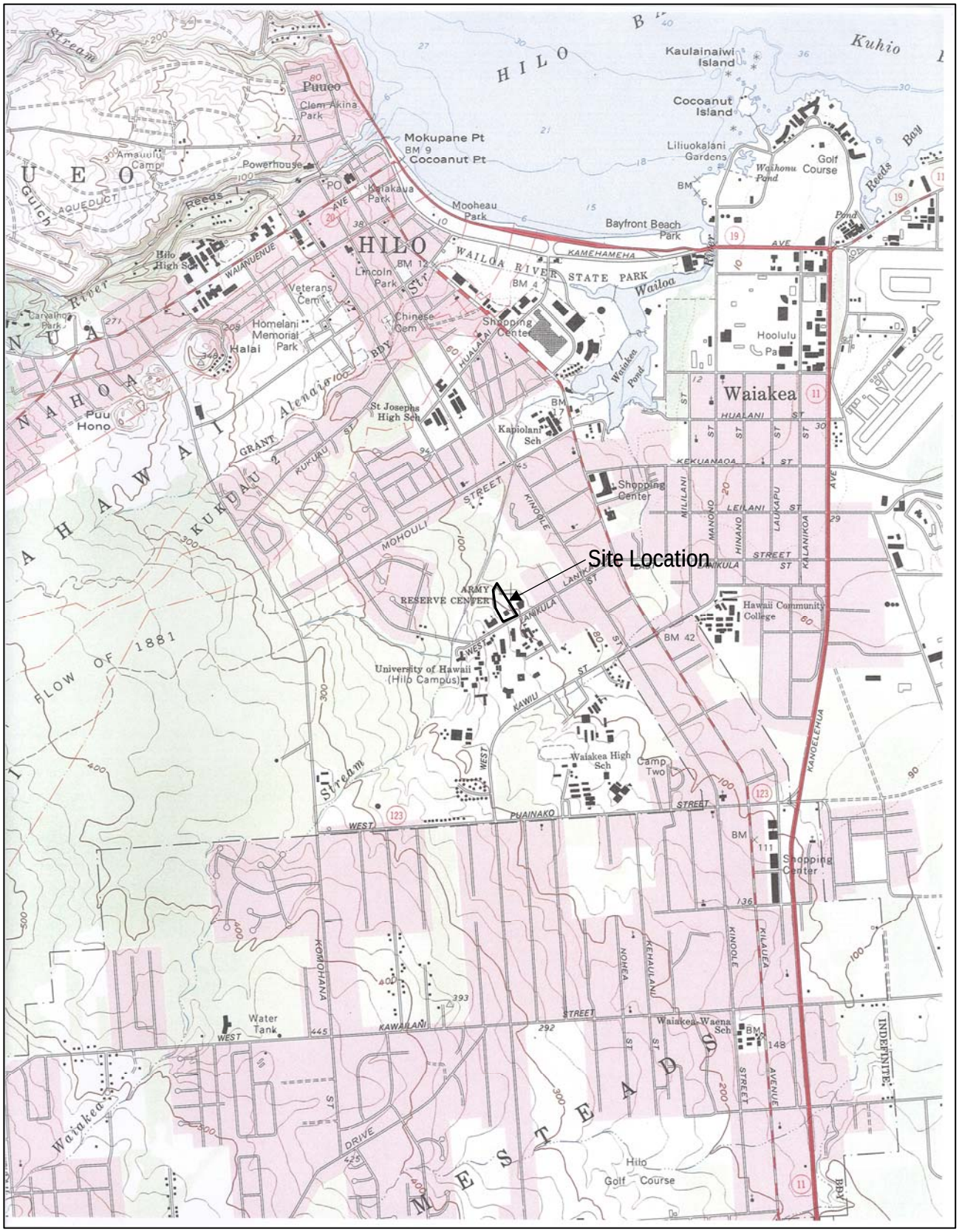
North

Not to Scale

SOURCE: R.M. Towill Corporation Survey and Photogrammetry Department.

FIGURE 11
1977 Aerial Photograph
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



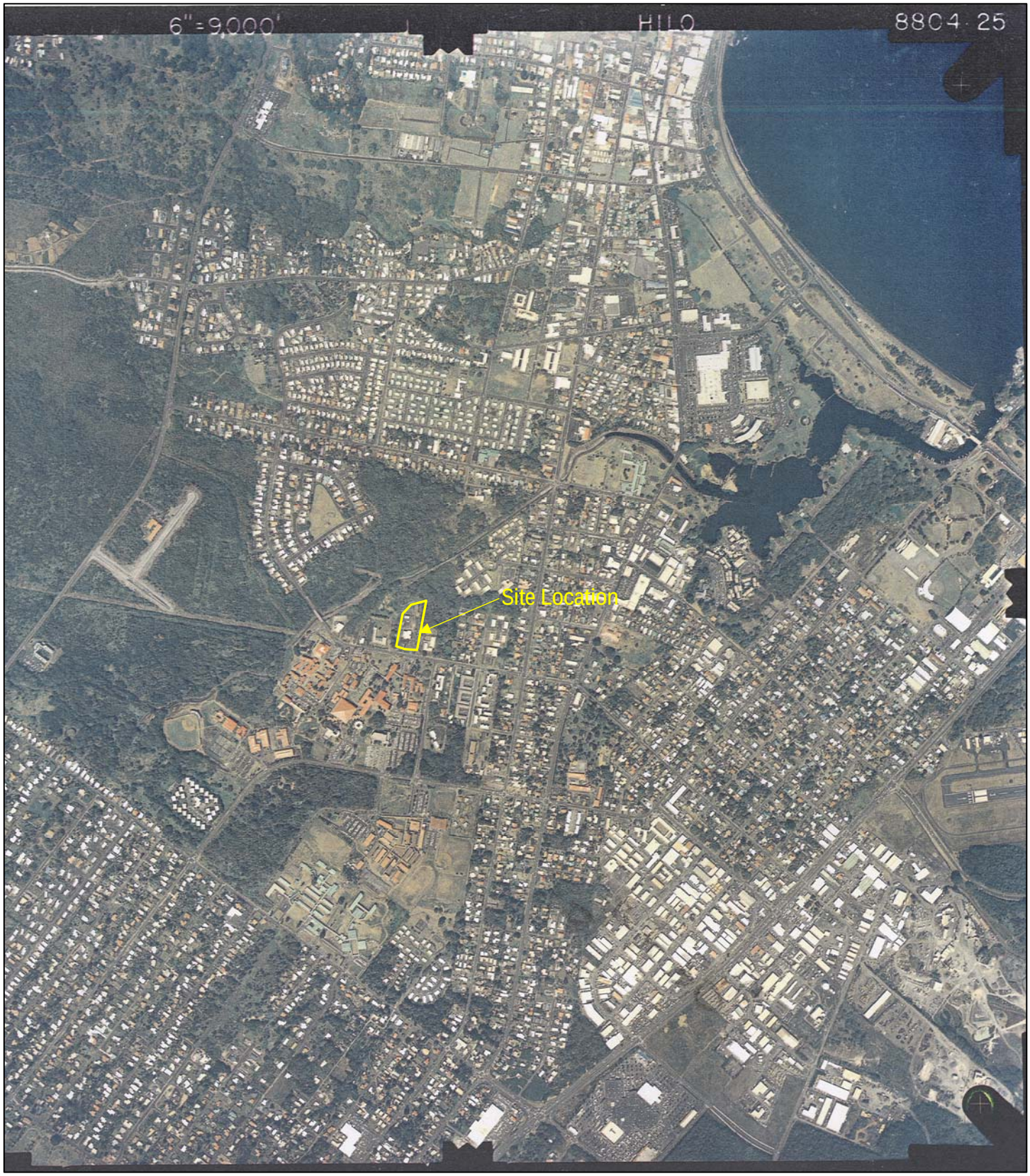
North

Not to Scale

SOURCE: EDR Historical Topographic Report, July 12, 2006

FIGURE 12
1981 USGS 7.5-Minute Topographic Map,
Hilo, Hawaii
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



North

Not to Scale

SOURCE: R.M. Towill Corporation Survey and Photogrammetry Department.

FIGURE 13
1992 Aerial Photograph
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL

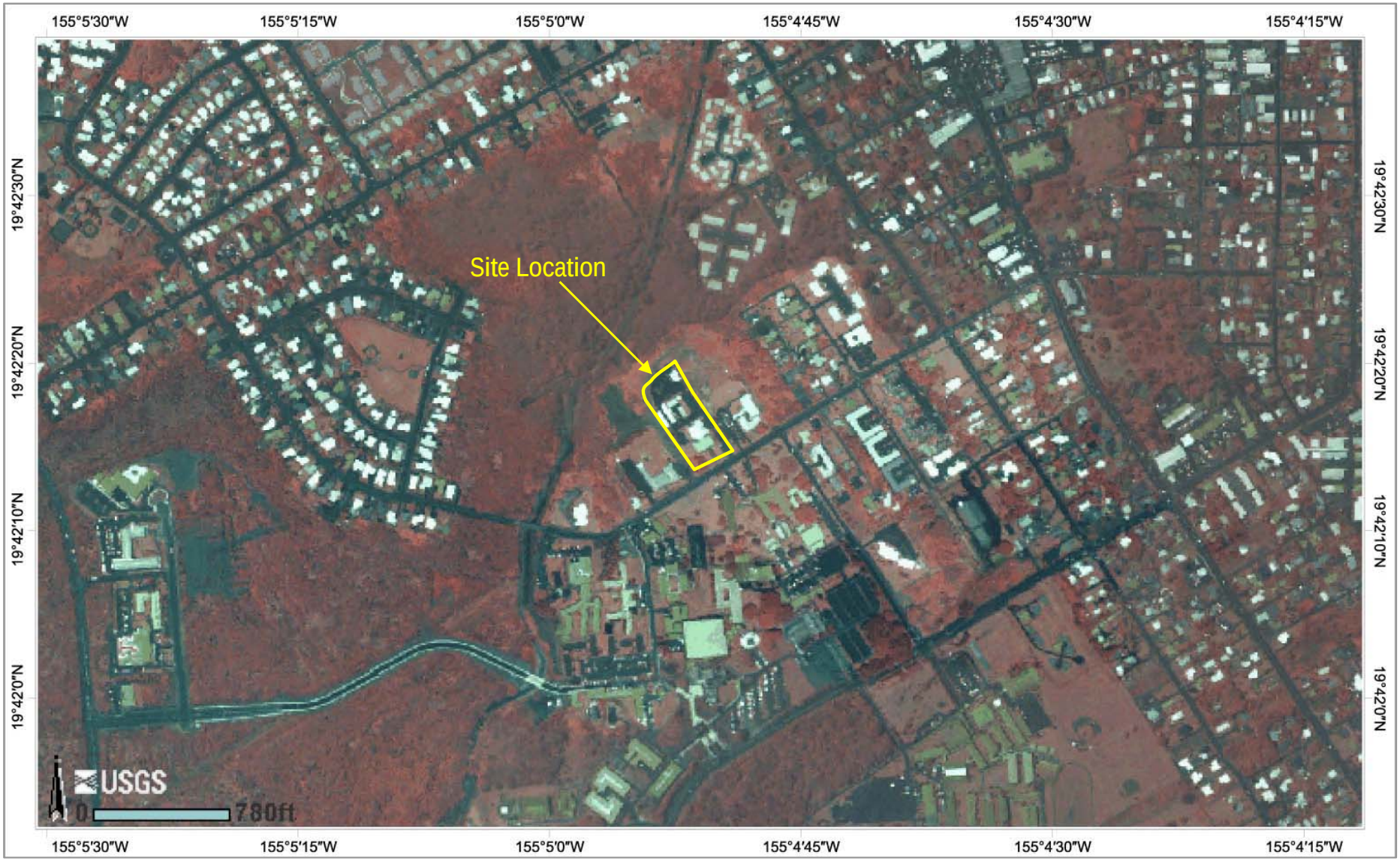
North

Not to Scale

SOURCE: R.M. Towill Corporation Survey and Photogrammetry Department.

FIGURE 14
2003 Aerial Photograph
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



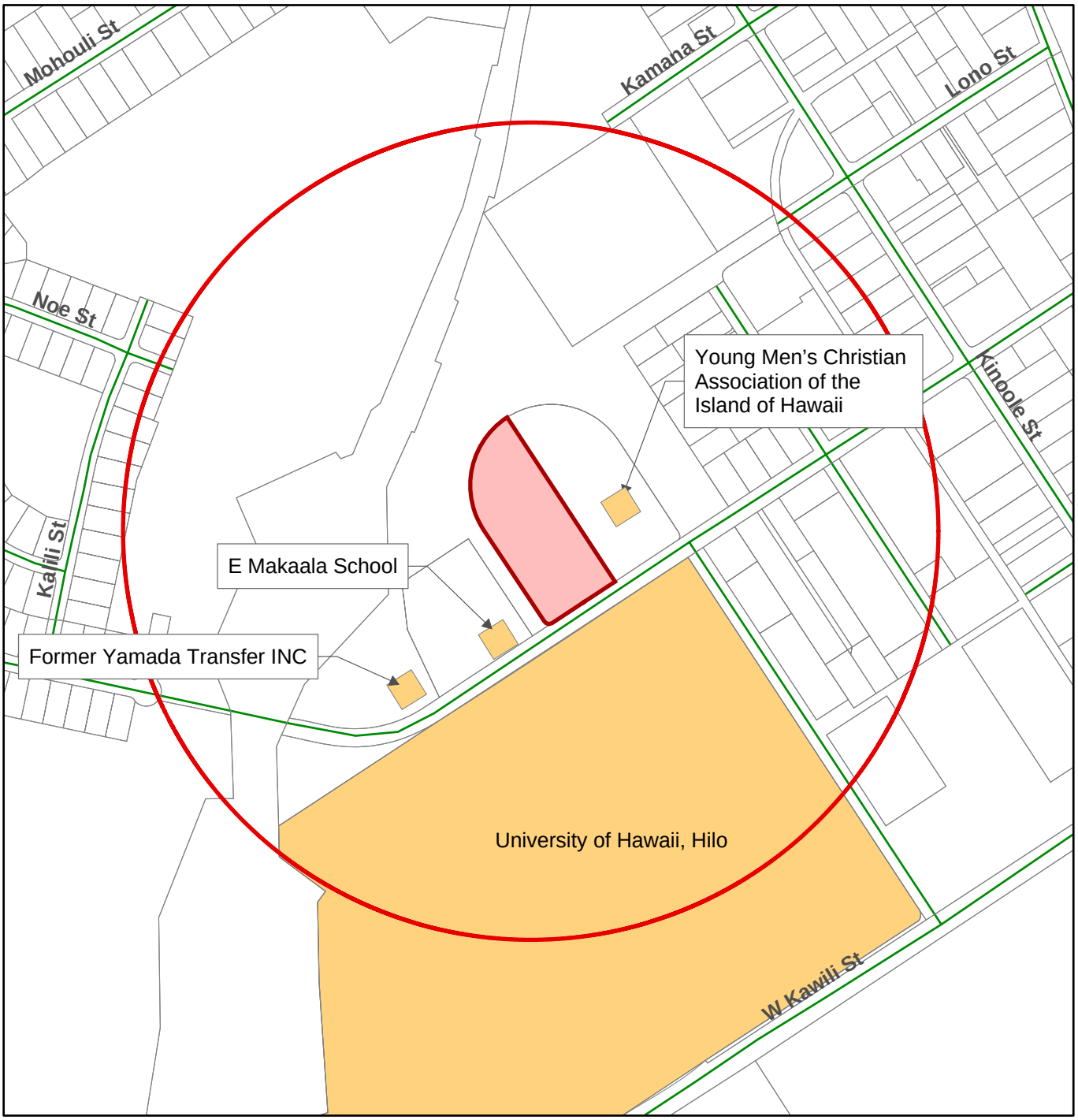
North

Not to Scale

SOURCE: U.S. Department of the Interior, U.S. Geological Survey – The National Map, URL: http://nmviewogc.cr.usgs.gov/ , 09/14/2005 Imagery type: Hawaii (big Island) 1 Meter DOQ.

FIGURE 15
2005 Aerial Photograph
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL



Legend:

- Subject Property (SFC Minoru Kunieda USARC)
- Tax Map Key (parcel)
- Adjacent Properties within 0.25 mile
- Road
- 0.25 Mile radius

N

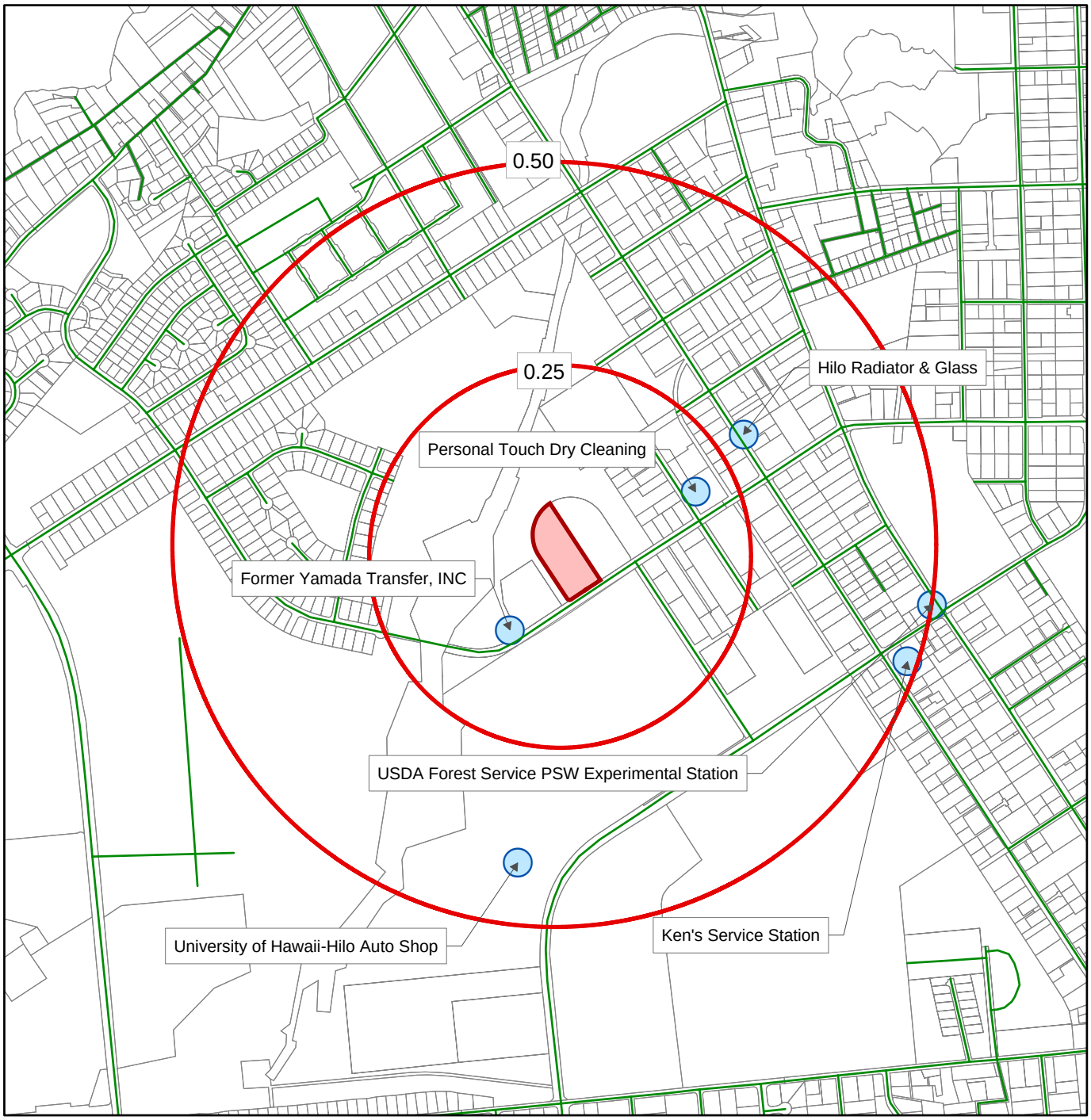
0 0.125 0.25 Miles

FIGURE 16

Adjacent Properties
SFC Minoru Kunieda USARC

Phase 1 ECP Report

CH2MHILL



Legend:

- Road
- Subject Property (SFC Minoru Kunieda USARC)
- Tax Map Key (parcel)
- Approximate Location of Environmental Sites
- 0.25 Mile radius

N

0 0.125 0.25

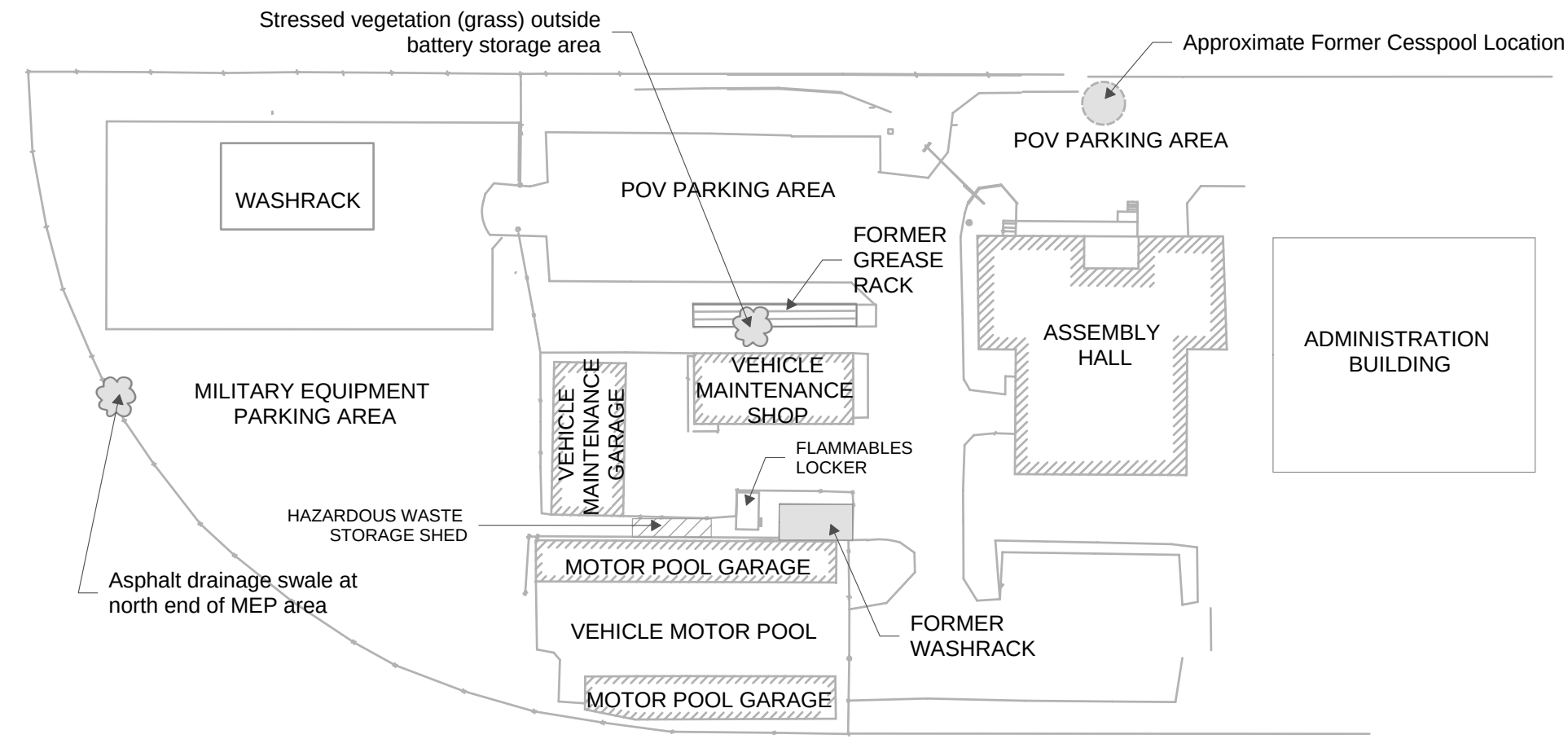
Miles

FIGURE 17

Sites With Environmental Conditions
Within 0.5 Miles Radius
SFC Minoru Kunieda USARC

Phase 1 ECP Report

CH2MHILL



Legend:

Major Findings

N

NOT TO SCALE

FIGURE 18

Major Findings
SFC Minoru Kunieda USARC
Phase 1 ECP Report

CH2MHILL

Appendix B

Site Reconnaissance Photographs

APPENDIX B

Site Reconnaissance Photographs

1. Stressed Vegetation Outside Battery Storage Room Facing South.

2. Etched Concrete in Battery Storage Room Facing West.

3. Oil Leaking From Military Equipment in Motor Pool Garage Facing South.

4. Hazardous Materials Storage Area Facing Northwest.

5. Hazardous Materials in Flammables Locker Facing South.

6. Former Wash Rack Location in Background Next to Nearest Corner of Motor Pool Garage Facing Northwest.

7. Stains on Asphalt in Vehicle Maintenance Garage Facing East.

8. Asphalt Drainage Swale at North Edge of MEP Parking Facing North.

9. Grease Trap Outside Assembly Hall Facing Northeast.

10. Stains on Asphalt Near Storm Drain at South Side of Vehicle Maintenance Garage Facing Northeast..

11. Stained Asphalt Where Stormwater Drains from Paved Area South of Vehicle Maintenance Shop Facing East.

12. Encapsulated ACM Joint Sealer in Vehicle Maintenance Shop Facing North.

Appendix C

Property Acquisition Documents and Chain of Title Report

Deed No. S-19642

Book 4389, page 436
Recorded on 10-24-62 in the
Bureau of Conveyances, State
of Hawaii

D E E D

KNOW ALL MEN BY THESE PRESENTS:

THAT the STATE OF HAWAII, hereinafter referred to as the "GRANTOR", by and through its Board of Land and Natural Resources, pursuant to the provisions of Section 90, Act 32, Session Laws of Hawaii 1962, and in consideration of the sum of ONE DOLLAR ($1.00) and other good and valuable consideration, receipt thereof is hereby acknowledged, does hereby remise, release and forever quitclaim unto the UNITED STATES OF AMERICA, its successors and assigns, hereinafter referred to as the "GRANTEE", all of its right, title and interest in and to the following described parcel of land:

LOT A

Portion of the Government (Crown) Land of Waiakea

Waiakea, South Hilo, Hawaii

Beginning at the east corner of this lot, the south corner of Lot B, and on the northwest side of Lanihaula Street, the coordinates of said point of beginning referred to Government Survey Triangulation Station "HALAY" being 1524.85 feet South and 5598.62 feet East, as shown on Government Survey Registered Map 4103, thence running by azimuths measured clockwise from True South:-

1. 58° 10' 248.43 feet along the northwest side of Lanihaula Street;

2. Thence along the northeast side of Road Reserve, 50.00 feet wide, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being 103° 10' 28.28 feet;

3. 148° 10' 370.00 feet along the northeast side of Road Reserve, 50.00 feet wide;

4. Thence along the easterly side of Road Reserve, 50.00 feet wide, on a curve to the right with a radius of 268.43 feet, the chord azimuth and distance being 193° 10' 379.62 feet;

5. 328° 10' 658.43 feet along Lot B, to the point of beginning and containing an AREA OF 3.700 ACRES.

TO HAVE AND TO HOLD the above described premises, together with all rights, easements, improvements, and appurtenances thereunto belonging or situate thereon unto the said Grantee, its successors and assigns, forever; PROVIDED, HOWEVER, that in the event said property shall not be used by the Government for a period in excess of three (3) consecutive years for the training of Reserve Components of the Armed Forces, exclusive of any period that the United States of America might be engaged in actual hostilities, then, and in that event, title, right of possession, and all other rights transferred by this instrument shall revert to the State of Hawaii; provided further, however, that in case of revestment of title in said State of Hawaii as hereinabove provided for, the United States of America shall have the right during a period of six (6) months after such revestment, and not thereafter, to remove any and all improvements constructed or placed on said tract by the United States. Surrender of the title and possessory rights of the United States of America in and to the property shall subsequently be evidenced by the execution and delivery of a quitclaim deed.

IN WITNESS WHEREOF, the STATE OF HAWAII, the Grantor herein, by its Board of Land and Natural Resources, has caused

Director of Land and Natural Resources and countersigned by a member of the Board of Land and Natural Resources, this 23rd day of October, 1962.

STATE OF HAWAII

By: _____ (S E A L)
Director
Department of Land and
Natural Resources

COUNTERSIGNED:

By: _____
Member
Board of Land and Natural
Resources

APPROVED AS TO FORM:

_____
Attorney General

bys
Checked by:

2055 East Rio Salado Parkway, Suite 201
Tempe, Arizona 85281
Phone: (480) 967-6752
Fax Number: (480) 966-9422
Web Site: www.netronline.com

HISTORICAL CHAIN OF TITLE REPORT

SFC MINORU KUNIEDA USARC, HI
470 W LANIKAULA ST.
HILO, HAWAII

Submitted to:

ENVIRONMENTAL DATA RESOURCES, INC.
C/O
CH2M HILL
1569 Stampmill Way
Lawrenceville, Georgia 30043
(770) 338-1589

Attention: Mary Jacques

Project No. N06-5517

Tuesday, August 29, 2006

NETR- Real Estate Research & Information hereby submits the following ASTM historical chain-of-title to the land described below, subject to the leases/miscellaneous shown in Section 2. Title to the estate or interest covered by this report appears to be vested in:

UNITED STATES OF AMERICA

The following is the current property legal description:

All those certain pieces or parcels of land being Lot A, a portion of Government (Crown) land of Waiakea, also known as Tracts 101-E-1 and 101-E-2 USARC, lying and situate in the City of Hilo, County of Hawaii, State of Hawaii.

TMK: 240560160000

1. HISTORICAL CHAIN OF TITLE

Records were searched at the Hawaii State Bureau of Conveyances Office back to 1940. Based on our research, the Territory of Hawaii acquired title to the property prior to 1940. The following conveyances were found of record:

1. DEED:

RECORDED:	10-24-1962
GRANTOR:	State of Hawaii
GRANTEE:	United States of America
INSTRUMENT:	Bk 4389, Pg 436

2. LEASES AND MISCELLANEOUS

1. LEASE:

RECORDED:	10-09-1943
LESSOR:	Territory of Hawaii
LESSEE:	Waiakea Mill Company
INSTRUMENT:	GL2978

2. EASEMENT:

RECORDED:	03-23-1964
GRANTOR:	County of Hawaii
GRANTEE:	United States of America
INSTRUMENT:	Bk 4714, Pg 112

3. No institutional controls or engineering controls were found of record

3. LIMITATION

This report was prepared for the use of Environmental Data Resources, Inc., and CH2M Hill, exclusively. This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. NETR- Real Estate Research & Information does not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information included in this report since this information is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

64 - 8973

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECEIVED FOR RECORD

'64 MAR 23 PM 3:58

LIBER 4714 PAGE 112

Certified to be a true and correct copy of the original presented for record.
MICHIKI ADACHI, Registrar.
Clerk
By:

RECORDATION REQUESTED BY:
BOARD OF SUPERVISORS
COUNTY OF HAWAII
HILO, HAWAII
DEPT. OF LAND AND NATURAL RESOURCES
LAND MANAGEMENT DIVISION
AFTER RECORDATION, RETURN TO:
OFFICE OF THE COUNTY CLERK
COUNTY OF HAWAII
DEPT. OF LAND AND NATURAL RESOURCES
LAND MANAGEMENT DIVISION
RETURN BY: MAIL (X) PICKUP ( )

SPACE ABOVE THIS LINE FOR REGISTRAR'S USE

Control No. 130-44

Tracts 101-E-1 and 101-E-2,
USARC, Hilo, Hawaii

THIS INDENTURE, made and entered into this 18th day of March, 1964, by and between the COUNTY OF HAWAII, hereinafter called the "Grantor," and the UNITED STATES OF AMERICA, hereinafter called the "Government,"

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar ($1.00), the receipt and sufficiency whereof are hereby acknowledged, does hereby grant, bargain, sell, and convey unto the Government a perpetual non-exclusive easement and right-of-way over and across two (2) parcels of land, situate at Waiakea, South Hilo, Hawaii, said parcels indicated as Parcels "A" and "B" on U. S. Army Engineer District, Honolulu, drawing titled "Site Plan, U. S. Army Reserve Training Center, Hilo, Hawaii, sheet 1 of 1," dated 3 July 1962, and amended 27 January 1964, attached hereto and hereby made a part hereof, together with the right to construct and forever use and maintain a walkway over and across Parcel "A" and pavement for driveway purpose over and across Parcel "B."

RESERVING, HOWEVER, to the Grantor and the general public the right to use

TO HAVE AND TO HOLD the easement areas unto the Government and its assigns forever; provided that should the Government cease to use the easement areas for a period of three (3) consecutive years, then and in such event the rights granted herein shall cease and determine without any action on the part of the Grantor, it being understood and agreed, however, that the Government shall have the right and, upon request, will remove from the easement areas at its own expense any improvements placed thereon by the Government.

This easement is granted subject to the following terms, conditions and covenants:

1. All construction performed by the Government shall be accomplished in accordance with County of Hawaii standards.

2. All improvements placed on or in the easement areas by the Government shall be and remain the property of the Government and may be removed or otherwise disposed of by the Government at any time.

3. Upon completion of any work performed in all or any portion of the easement areas, the Government shall remove all equipment and unused materials from the surface thereof and shall leave the said surface in a clean and presentable condition.

4. The Grantor shall not be responsible or liable for injuries to persons or damage to property when such injuries or damage are caused by or result from the Government's use of the easement areas under the terms of this easement and are not due to the negligence of the Grantor.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed on the day and year first above written.

COUNTY OF HAWAII

By: Helene Hale

Chairman & Executive Officer

STATE OF HAWAII)
) SS.
COUNTY OF HAWAII)

LIBER 4714 PAGE 114

On this 18th day of March, 19 64, before me appeared Helene H. Hale and Margaret M. Kaaua, to me personally known, who, being by me duly sworn, did say that they are the Chairman & Executive Officer and County Clerk, respectively, of the COUNTY OF HAWAII, a municipal corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and sealed in behalf of said municipal corporation by authority of its BOARD OF SUPERVISORS, and said Helene H. Hale and Margaret M. Kaaua acknowledged the instrument to be the free act and deed of said municipal corporation.

Notary Public, Third Judicial Circuit,
State of Hawaii

My commission expires 2/25/65

STATE OF HAWAII)
) SS.
COUNTY OF HAWAII)

LIBER 4714 PAGE 114

On this 18th day of March, 19 64, before me appeared Helene H. Hale and Margaret M. Kaaua, to me personally known, who, being by me duly sworn, did say that they are the Chairman & Executive Officer and County Clerk, respectively, of the COUNTY OF HAWAII, a municipal corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and sealed in behalf of said municipal corporation by authority of its BOARD OF SUPERVISORS, and said Helene H. Hale and Margaret M. Kaaua acknowledged the instrument to be the free act and deed of said municipal corporation.

Florence Nagamoto
Notary Public, Third Judicial Circuit,
State of Hawaii

My commission expires 2/28/65

Appendix D

Previous Environmental Site Assessment Reports

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location if Different)*

NAME U.S. Army Reserve

ADDRESS 9th Regional Support Command
ATTN: APIX-EN
Ft Shafter, HI 96819-2135

FACILITY Kunieda USAR Center

LOCATION 470 W. Lanikaula St
Hilo, HI 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
HI R8Ø A455	Site 1

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	98	10	01	TO	99	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
BOD	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Composit
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	
COD	SAMPLE MEASUREMENT	***	***	***	***	17	***	mg/l	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
Suspended Solids	SAMPLE MEASUREMENT	***	***	***	***	32	***	mg/l	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
Total Phosphorus	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
Total Nitrogen	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
Nitrate + Nitrite Nitrogen	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
Oil and Grease	SAMPLE MEASUREMENT	***	***	***	***	ND	***		0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
William S. Wood MAJ, EN ADCSENG	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	W S Wood SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	808	438-1600	2000	Jan	25
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location if Different)*

NAME US Army Reserve

ADDRESS 9th Regional Support Command
ATTN: APIX-EN
Ft Shafter, HI 96819-2135

FACILITY Kunieda USAR Center

LOCATION 470 W. Lanikaula St
Hilo, HI 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

PERMIT NUMBER *(2-16)*	DISCHARGE NUMBER *(17-19)*
HI R80 A455	Site 1

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	1998	10	01	TO	1999	09	30
	(20-21)	*(22-23)*	*(24-25)*		*(26-27)*	*(28-29)*	*(30-31)*

NOTE: Read instructions before completing this form.

PARAMETER *(32-37)*		*(3 Card Only)* QUANTITY OR LOADING *(46-53)* AVERAGE	*(54-61)* MAXIMUM	UNITS	*(4 Card Only)* QUANTITY OR CONCENTRATION *(38-45)* MINIMUM	*(46-53)* AVERAGE	*(54-61)* MAXIMUM	UNITS	NO. EX *(62-63)*	FREQUENCY OF ANALYSIS *(64-68)*	SAMPLE TYPE *(69-70)*
pH	SAMPLE MEASUREMENT	***	***	***	***	4.45	***	pH	1	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
++++pH	SAMPLE MEASUREMENT	***	***	***	***	6.0	***	pH	0	1	
	PERMIT REQUIREMENT	***	***	***	***	Report	***			ANNUAL	Grab
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE		DATE		
William S. Wood MAJ, En ADCSENG	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	W S Wood SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	808 438-1600	2000	Jan	25
TYPED OR PRINTED		AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

++++pH: Second sample taken after receipt of pH results from initial sample. Believe contaminated container was used to collect sample for pH. Resampling revealed pH within normal parameters.

DEPARTMENT OF THE ARMY
HEADQUARTERS 9TH REGIONAL SUPPORT COMMAND
1557 Pass Street, Fort Shafter Flats
Honolulu, Hawaii 96819-2135

28 November 2001

REPLY TO
ATTENTION OF:
Engineering Department
APIX-EN

State Department of Health
ATTN: Clean Water Branch
919 Ala Moana Boulevard, Room 308
Honolulu, Hawaii 96814

Enclosed is the annual Discharge Monitoring Report for the Kunieda USAR Center in Hilo, Hawaii in compliance with File number HI R80A455. A report of No Discharge is filed, as there was either lack of a significant storm event during the work week or no personnel on-site when a storm event occurred.

Every attempt will be made to obtain samples for analysis during the current monitoring year in order that the prescribed parameters may be evaluated.

POC or this headquarters is Mr. Wayne Mitsko, Environmental Protection Specialist, at 438-1600 Extension 3247.

FOR THE COMMANDER:

for MAJ

MELVIN N. KAKU
Lieutenant Colonel, General Staff
Deputy Chief of Staff
for Engineering

Enclosure
DMR

NAME US.Army Reserve
ADDRESS 9th Regioanl Support Command
ATTN: APIX-EN
Ft Shafter, HI 96819-2135
FACILITY Kunieda USAR Center
LOCATION 470 W. Lanikaula Street
Hilo, HI 96720-4038

DISCHARGE MONITORING REPORT (DMR)

OMB No. 2040-0004
Approval expires 05-31-98

PERMIT NUMBER (2-16)	DISCHARGE NUMBER (17-19)
HI R8Ø A455	Site 1

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	00	10	01	TO	01	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
No discharge occured during the monitoring period.	SAMPLE MEASUREMENT	NO DISCHARGE			NO DISCHARGE						
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
JOHN L.E. LOSEY MAJ, EN ADCSENG	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	Ext 3255 (808)438-1600	2001	Nov	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

No discharge was noted during the monitoring period.

DEPARTMENT OF THE ARMY
Headquarters, 9th Regional ReadinessCommand
1557 Pass Street, Fort Shafter Flats
Honolulu, Hawaii 96819-2135
29 December 2003

REPLY TO
ATTENTION OF

Environmental Division

State Department of Health
ATTN: Clean Water Branch
919 Ala Moana Boulevard, Room 308
Honolulu, Hawaii 96814

Enclosed is the annual Discharge Monitoring Report for the Kunieda USAR Center in Hilo, Hawaii in compliance with File Number HI R80A455. A report of No Discharge is filed, as there was either a lack of a significant storm event during the work-week or no personnel on site when a storm event occurred.

Every attempt will be made to obtain samples for analysis during the current monitoring year in order that the prescribed parameters may be evaluated.

POC for this headquarters is Mr. Wayne Mitsko, Environmental Protection Specialist, at 438-1600 Ext. 3247.

FOR THE COMMANDER:

Enclosure
DMR

FOR GERALD G. GIBBONS
Colonel, General Staff
Deputy Chief of Staff, Army Reserve
Installation Management

NAME US Army Reserve
ADDRESS 9th Regional Readiness Command
ATTN: APIX-EN
Ft Shafter, HI 96819-2135
FACILITY Kunieda USAR Center
LOCATION 470 W. Lanikaula Street
Hilo, HI 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

PERMIT NUMBER (2-16)	DISCHARGE NUMBER (17-19)
HI R80 A455	Site 1

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	02	10	01	TO	03	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
No discharge occured during the monitoring period.	SAMPLE MEASUREMENT	NO DISCHARGE			NO DISCHARGE						
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE		DATE		
STEWART R. FEARON MAJ, EN ADCSARIM	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	Stewart R. Fearon	Ext 3255 808 438-1600	2003	Dec	29
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

No discharge was noted during the monitoring period.

DEPARTMENT OF THE ARMY
Headquarters, 9th Regional ReadinessCommand
1557 Pass Street,
Honolulu, Hawaii 96819-2135
29 December 2004

REPLY TO
ATTENTION OF

Environmental Division

State Department of Health
ATTN: Clean Water Branch
919 Ala Moana Boulevard, Room 308
Honolulu, HI 96814

Enclosed is the annual Discharge Monitoring Report for the Kunieda USAR Center in Hilo, Hawaii in compliance with File Number HI R80A455. A report of No Discharge is filed, as there was either a lack of significant storm event during the work week or no personnel on site when a storm event occurred. At the present time, a significant portion of the unit personnel are deployed overseas, and not located at the site.

Every attempt will be made to obtain samples for analysis during the current monitoring year in order that the prescribed parameters may be evaluated.

POC for this headquarters is Mr. Wayne Mitsko, Environmental Protection Specialist, at (808)438-1600 Ext 3247 or mitskow@9rsc-usar.army.mil .

FOR THE COMMANDER:

for

GERALD G. GIBBONS
Colonel, General Staff
Deputy Chief of Staff, Army Reserve
Installation Management

Enclosure:
DMR

NAME US Army Reserve
ADDRESS 9th Regional Readiness Command
ATTN: APIX-EN
1557 Pass Street, Honolulu, HI 96819-2135
FACILITY Kunieda USAR Center
LOCATION 470 W. Lanikaula Street
Hilo, HI 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

PERMIT NUMBER	DISCHARGE NUMBER
HI R80 A455	Site 1

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	03	10	01	TO	04	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
No discharge occured during the monitoring period.	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
STEWART R. FEARON LTC, EN ADCSARIM	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	for Stewart T Fearon	Ext 3255 808 438-1600	2004	Dec	29
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

No discharge was noted during the monitoring period

DEPARTMENT OF THE ARMY
Headquarters, 9th Regional ReadinessCommand
1557 Pass Street, Fort Shafter Flats
Honolulu, Hawaii 96819-2135
30 November 2005

REPLY TO
ATTENTION OF:

Environmental Division

State Department of Health
ATTN: Clean Water Branch
919 Ala Moana Boulevard, Room 308
Honolulu, HI 96814

Enclosed is the annual Discharge Monitoring Report for the Kunida USAR Center in Hilo, Hawaii in compliance with File Number HI R80 A455.

POC for this headquarters is Mr. Wayne Mitsko, Environmental Manager, at (808)438-1600 Ext 3247 or mitskow@9rsc-usar.army.mil.

FOR THE COMMANDER:

GERALD G. GIBBONS
Colonel, General Staff
Deputy Chief of Staff, Army Reserve
Installation Management

Enclosure
DMR

NAME U.S. Army Reserve
ADDRESS 9th Regional Readiness Command
1557 Pass Street
Ft Shafter, Hawaii 96819-2135
FACILITY Kunieda USAR Center
LOCATION 470 W. Lanikaula Street
Hilo, Hawaii 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT *(DMR)*

(2-16) HI R80 A455 — PERMIT NUMBER

(17-19) Site 1 — DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	10	01	TO	05	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Det Limit	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
BOD (2.00 mg/l)	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
COD (15.0 mg/l)	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
(1.00 mg/l)	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
Suspended Solids	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
(0.00500 mg/l)	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
Total Phosphorus	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
(0.200 mg/l)	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
Total Nitrogen	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
(0.0100 mg/l)	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
Nitrate + Nitrite Nitrogen	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	
(1.08 mg/l)	SAMPLE MEASUREMENT	***	***	***	***	ND	***	mg/l	0	1	Grab
Oil and Grease	PERMIT REQUIREMENT	***	***	***	***	Report	***			Annual	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
JOHN D. BACON MAJ, EN
Engineer Officer
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*

John D Bacon
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
Ext 3254		2005	Nov	30
808	438-1600			
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME U.S. Army Reserve

ADDRESS 9th Regional Radiness Command
1557 Pass Street
Fort Shafter, HI 96819-2135

FACILITY LOCATION Kunieda USAR Center
470 W. Lanikaula Street
Hilo, Hawaii 96720-4038

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (2-16)	DISCHARGE NUMBER (17-19)
HI R80 A455	Site 1

Form Approved.
OMB No. 2040-0004
Approval expires 05-31-98

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	10	01	TO	05	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUANTITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
pH (1.0 pH units)	SAMPLE MEASUREMENT	***	***	***	***	5.73	***	pH	0	1	Grab
	PERMIT REQUIREMENT	***	***	***	5.5	Report	8.0			Annual	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
JOHN D. BACON MAJ, EN Engineer Officer	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*	John D Bacon SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	Ext 3254 808 438-1600 AREA CODE NUMBER	2005	Nov	30
TYPED OR PRINTED				YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

State of Hawaii, Department of Health, Clean Water Branch

CWB-NOI Form B

Notice of Intent for HAR, Chapter 11-55, Appendix B - NPDES General Permit Coverage Authorizing Discharges of Storm Water Associated With Industrial Activities (as defined in 40 CFR §§122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi))

Before completing this form, read the General Guidelines for CWB-NOI Forms and Guidelines for CWB-NOI Form B. Alteration of the text in this form may delay the processing of this submittal.

1. Owner Information (see Guidelines for CWB-NOI Form B - Note 1)

Legal Name: Headquarters, 9th Regional Support Command

Mailing Address: ATTN: APIX-EN, 1557 Pass Street

City, State and Zip Code+4: Fort Shafter Flats, Honolulu, HI 96819-2135

Street Address: Same as above

City, State and Zip Code+4:

Contact Person & Title: MAJOR Stewart Fearon US Army Reserve

Phone No.: (808) 438-1600 X3254 Fax No.: (808) 438-7473

2. Owner Type (see Guidelines for CWB-NOI Form B - Note 2)

City [ ] County [ ] State [ ] Federal [X] Private [ ] Other [ ]

If "Other" is checked, specify the type below:

3. Operator Information (see Guidelines for CWB-NOI Form B - Note 3)

Legal Name: Kunieda USAR Center

Mailing Address: 470 West Lanikaula Street

City, State and Zip Code+4: Hilo, Hawaii 96720-4038

Street Address: Same as above

City, State and Zip Code+4:

Contact Person & Title: Ms Sharon Kuniyoshi Unit Administrator

Phone No.: (808) 935-8463 Fax No.: (808) 935-4257

4. Facility Information (see Guidelines for CWB-NOI Form B - Note 4)

Legal Name: Kunieda U.S. Army Reserve Center

Mailing Address: 470 West Lanikaula Street

City, State and Zip Code+4: Hilo, HI 96720-4038

Street Address: Same as above

City, State and Zip Code+4:

Contact Person & Title: Ms Sharon Kuniyoshi Unit Administrator

Phone No.: (808) 935-8463 Fax No.: (808) 935-4257

Island: Hawaii

Tax Map Key No(s).			
Zone	Section	Plat	Parcel(s)
2	4	56	16

5. Receiving State Water(s) Information (see Guidelines for CWB-NOI Form B - Note 5)

a. Receiving State Water Name: Waiakea Stream

Discharge Point Coordinates into the Receiving State Water:

Latitude: 19 ° 45 ' 00 " N Longitude: 155 ° 07 ' 00 " W

Classification: (check the appropriate space(s))

Inland: Class 1 [ ] Class 2 [x] and Estuary [ ]

Marine: Class AA [ ] Class A [ ] and Embayment [ ]

b. Are there additional discharge points into receiving State waters?

No [x] Yes [ ] If yes, provide the information requested in Item 5.a. on a separate sheet.

c. Does the discharge initially enter a separate storm water drainage system?

No [x] Yes [ ] If yes, provide the following information. Attach a separate sheet with the requested information if there is more than one (1) discharge point into the separate storm water drainage system.

i. Drainage System Owner's name:

ii. Discharge Point Coordinates into the Drainage System:

Latitude: ° ' " N Longitude: ° ' " W

iii. A copy of the permit, license, or equivalent written approval granted by the owner(s) of the drainage system(s) allowing the subject discharge to enter their drainage system(s) is attached.

Yes [ ] No [ ], an explanation is attached.

6. Quantity of Storm Water Discharge (see Guidelines for CWB-NOI Form B - Note 6)

Basin 1 Basin 2
1,455GPM 1662GPM (cfs/gpd)

7. Non-Storm Water Discharge Information (see Guidelines for CWB-NOI Form B - Note 7)

a. Source of the non-storm water discharge: NA

Does the non-storm water discharge commingle with the storm water discharge? If so, where? NA

b. Period of non-storm water discharge (check the appropriate space(s)) NA

Continuous [ ] Seasonal [ ] Occasional [ ]

Daily [ ] Intermittent [ ] Emergency [ ]

8. Location Map (see Guidelines for CWB-NOI Form B - Note 8)

A topographic map or maps of the area which clearly show the following is/are attached:

Yes [X] No [ ]

a. Legal boundaries of the facility,

b. Location and identification number of each of the facility's existing and/or proposed outfalls or discharge points, and

c. Receiving State water(s) and receiving storm water drainage system(s), if applicable, identified and labeled.

9. Flow Chart (see Guidelines for CWB-NOI Form B - Note 9)

A flow chart or line drawing showing the general route taken by storm water through the facility from intake to the discharge point is attached.

Yes [X] No [ ]

Facility------Storm Drain------Waiakea Stream-----Hilo Bay

10. Existing or Pending Permits, Licenses, or Approvals (see Guidelines for CWB-NOI Form B - Note 10)

Provide the status and corresponding file numbers on any existing or pending environmental permits.

a. Other NPDES Permit or NGPC File No.: HI R80A455

b. DA Permit: NA

c. Section 401 WQC: NA

d. RCRA Permit (Hazardous Wastes): NA

e. Facility on SARA 313 List (identify SARA 313 chemicals on site):

NA

f. Other (Specify): NA

11. NGPC Renewal (see Guidelines for CWB-NOI Form B - Note 11)

Is this an application for NGPC renewal?

No [ ] Yes [X] If yes, provide the assigned File No.: HI R80A455

12. Automatic Coverage Under General Permit (see Guidelines for CWB-NOI Form B - Note 12)

a. [ ] I elect to claim automatic coverage per HAR, Section 11-55-34.09(f).

b. [X] I elect to waive automatic coverage per HAR, Section 11-55-34.09(g).

13. North American Industrial Classification System (NAICS) United States Structure Codes (see Guidelines for CWB-NOI Form B - Note 13)

	NAICS Codes						Description
a	9	2	8	1	1		National Security
b							
c							
d							

14. Facility Site Map (see Guidelines for CWB-NOI Form B - Note 14)

a. A facility site map(s) which shows the following information is attached: Yes [X] No [ ]

i. An outline of the drainage area of each storm water outfall and each outfall location;
ii. Location(s) of any existing structural control measures used to reduce pollutants in storm water runoff;
iii. Land area of the facility (SF) and amount of impervious area (SF);
iv. Location(s) of nearest receiving State water(s);
v. Location(s) of materials listed below which are exposed to storm water:
   (1) Handling equipment or activities,
   (2) Raw materials,
   (3) Intermediate products,
   (4) Final products,
   (5) Waste materials,
   (6) Byproducts,
   (7) Industrial machinery,
   (8) Location(s) where major spills or leaks have occurred,
   (9) Location(s) of fueling stations which are exposed to storm water,
   (10) Location(s) of vehicle and equipment maintenance and/or cleaning areas which are exposed to storm water, and

(11) Location(s) of loading/unloading areas which are exposed to storm water;

vi. Location(s) of treatment, storage, or waste disposal areas which are exposed to storm water;

vii. Location(s) of liquid storage tanks exposed to storm water;

viii. Location(s) of processing areas exposed to storm water; and

ix. Location(s) of storage areas exposed to storm water.

b. Indicate which items are not applicable (use item number above):

Following items are NA v.(2), (3),(4),(5), (6),(8), (9),

15. Storm Water Pollution Control Plan (SWPCP) (see Guidelines for CWB-NOI Form B - Note 15)

a. [ ] The proposed facility will be a new discharger. A SWPCP which meets the applicable requirements as specified in Sections 5 and/or 6 of HAR, Chapter 11-55, Appendix B (choose one). The SWPCP will be implemented within 180 days after submittal:

[ ] i. Is attached to CWB-NOI Form B

[ ] ii. Will be submitted within 120 days of the date of NGPC issuance

[ ] iii. Will be submitted within 120 days of the applicant claimed automatic coverage.

b. [x] The facility is an existing discharger with an NGPC. The existing or updated SWPCP which meets the applicable requirements as specified in Sections 5 and/or 6 of HAR, Chapter 11-55, Appendix B is attached to CWB-NOI Form B and will continue to be implemented.

16. Multiple Outfall or Discharge Point Information (see Guidelines for CWB-NOI Form B - Note 16)

Outfall Number or Discharge Point	Discharge sampled & analyzed?		
	Yes	No	Reason not sampled
NA			

17. Physical Storm Water Runoff Quality (see Guidelines for CWB-NOI Form B - Note 17)

a. Check the appropriate column.

Parameter	Believe Present	Believe Absent
Floating Debris	x	
Scum or Foam		x
Color		x
Odor		x

b. Provide an explanation for the parameters believed to be present in the discharge.

Floating Debris: Blades of grass, small twigs swept off pkg lot.

18. Water Quality Parameters (see Guidelines for CWB-NOI Form B - Note 18)

a. Parameters must be tested and reported. Provide laboratory data sheets in addition to completing the following table. If not available, go to Item 18.b.

Parameter	Test Result	Units	Test Method	Method Detection Limit
Total Nitrogen (10 µg/l)	ND	µg/l	E351.2	0.7500mg/l
Ammonia Nitrogen (1 µg/l)		µg/l		
Nitrate + Nitrite (1 µg/l)	ND	µg/l	E353.2	0.0500mg/l
Total Phosphorus (10 µg/l)	ND	µg/l	E365.4	0.100mg/l
Turbidity (0.1 NTU)	2.00	NTU	E180.1	0.100 NTU
Total Suspended Solids (1 mg/l)		mg/l		
pH (0.1 standard units)	5.96		E150.1	0.0100phUnits
Dissolved Oxygen (0.1 mg/l)		mg/l		
Oxygen Saturation (1%)		%		
Temperature (0.1 °C)		°C		
Salinity (0.1 ppt)		ppt		
or Chloride (0.1 mg/l)*		mg/l		
or Conductivity (1 µmhos/cm)*		µmhos/cm		
Oil and Grease (1 mg/l)	ND	mg/l	E413.1	1.11mg/l

* Fresh waters and effluent samples

b. ☐ Item 18.a. was not completed due to a lack of a representative storm event for sampling. The next representative storm event will be monitored and the test results as required in Item 18.a. will be submitted to the Department within 30 days of the sampling.

19. Toxic Parameters (see Guidelines for CWB-NOI Form B - Note 19 and Glossary of Chemicals)

Provide laboratory data sheets in addition to completing the following tables.

a. Metals

Total Recoverable Metal Parameter	Test Result	Units	Test Method	Method Detection Limit
Aluminum	NA	µg/l		
Antimony	NA	µg/l		
Arsenic	NA	µg/l		
Beryllium	NA	µg/l		
Cadmium	NA	µg/l		
Chromium (VI)	NA	µg/l		
Copper	NA	µg/l		
Lead	NA	µg/l		
Mercury	NA	µg/l		
Nickel	NA	µg/l		
Selenium	NA	µg/l		
Silver	NA	µg/l		
Thallium	NA	µg/l		
Tributyltin	NA	µg/l		
Zinc	NA	µg/l		

b. Organonitrogen Compounds

Organonitrogen Compound Parameter	Test Result	Units	Test Method	Method Detection Limit
Benzidine	NA	µg/l		
2,4-Dinitro-o-cresol	NA	µg/l		
Dinitrotoluenes	NA	µg/l		
1,2-Diphenylhydrazine	NA	µg/l		
Nitrobenzene	NA	µg/l		
Nitrosamines	NA	µg/l		
N-Nitrosodibutylamine	NA	µg/l		
N-Nitrosodiethylamine	NA	µg/l		
N-Nitrosodimethylamine	NA	µg/l		
N-Nitrosodiphenylamine	NA	µg/l		
N-Nitrosopyrrolidine	NA	µg/l		

c. Pesticides

Pesticide Parameter	Test Result	Units	Test Method	Method Detection Limit
Aldrin	NA	µg/l		
Chlordane	NA	µg/l		
Chlorpyrifos	NA	µg/l		
DDT	NA	µg/l		
Demeton	NA	µg/l		
Dieldrin	NA	µg/l		
Endosulfan	NA	µg/l		
Endrin	NA	µg/l		
Guthion	NA	µg/l		
Heptachlor	NA	µg/l		
Lindane	NA	µg/l		
Malathion	NA	µg/l		
Methoxychlor	NA	µg/l		
Mirex	NA	µg/l		
Parathion	NA	µg/l		
TDE - metabolite of DDT	NA	µg/l		
Toxaphene	NA	µg/l		

d. Phenols

Phenol Parameter	Test Result	Units	Test Method	Method Detection Limit
2-Chlorophenol	NA	µg/l		
2,4-Dichlorophenol	NA	µg/l		
2,4-Dimethylphenol	NA	µg/l		
Nitrophenols	NA	µg/l		
Pentachlorophenol	NA	µg/l		
Phenol	NA	µg/l		
2,3,5,6-Tetrachlorophenol	NA	µg/l		
2,4,6-Trichlorophenol	NA	µg/l		

e. Phthalates

Phthalate Parameter	Test Result	Units	Test Method	Method Detection Limit
Bis (2-ethylhexyl) phthalate	NA	µg/l		
Dibutyl phthalate (esters)	NA	µg/l		

Phthalate Parameter	Test Result	Units	Test Method	Method Detection Limit
Diethyl phthalate (esters)	NA	µg/l		
Dimethyl phthalate (esters)	NA	µg/l		

f. Polynuclear Aromatic Hydrocarbons

Polynuclear Aromatic Hydrocarbon Parameter	Test Result	Units	Test Method	Method Detection Limit
Acenaphthene	NA	µg/l		
Fluoranthene	NA	µg/l		
Naphthalene	NA	µg/l		
Polynuclear aromatic hydrocarbons	NA	µg/l		

g. Volatile Organics

Volatile Organic Parameter	Test Result	Units	Test Method	Method Detection Limit
Acrolein	NA	µg/l		
Acrylonitrile	NA	µg/l		
Benzene	NA	µg/l		
Carbon tetrachloride	NA	µg/l		
Bis(2-chloroethyl)ether	NA	µg/l		
Bis(chloroethers-methyl)	NA	µg/l		
Bis(chloroisopropyl)ether	NA	µg/l		
Chloroform	NA	µg/l		
Dichlorobenzenes	NA	µg/l		
Dichlorobenzidine	NA	µg/l		
1,2-Dichloroethane	NA	µg/l		
1,1-Dichloroethylene	NA	µg/l		
Dichloropropanes	NA	µg/l		
1,3-Dichloropropene	NA	µg/l		
Ethylbenzene	NA	µg/l		
Hexachlorobenzene	NA	µg/l		
Hexachlorobutadiene	NA	µg/l		
Hexachlorocyclohexane, alpha	NA	µg/l		
Hexachlorocyclohexane, beta	NA	µg/l		
Hexachlorocyclohexane, technical	NA	µg/l		
Hexachlorocyclopentadiene	NA	µg/l		
Hexachloroethane	NA	µg/l		

Volatile Organic Parameter	Test Result	Units	Test Method	Method Detection Limit
Isophorone	NA	µg/l		
Pentachlorobenzene	NA	µg/l		
Pentachloroethanes	NA	µg/l		
1,2,4,5-Tetrachlorobenzene	NA	µg/l		
1,1,2,2-Tetrachloroethane	NA	µg/l		
Tetrachloroethanes	NA	µg/l		
Tetrachloroethylene	NA	µg/l		
Toluene	NA	µg/l		
1,1,1-Trichloroethane	NA	µg/l		
1,1,2-Trichloroethane	NA	µg/l		
Trichloroethylene	NA	µg/l		
Vinyl chloride	NA	µg/l		

h. Others

Other Parameter	Test Result	Units	Test Method	Method Detection Limit
Chlorine	NA	µg/l		
Cyanide	NA	µg/l		
Dioxin	NA	µg/l		
Polychlorinated biphenyls	NA	µg/l		

20. Additional Information (see Guidelines for CWB-NOI Form B - Note 20)

NA

21. Authorization of Representative (see Guidelines for CWB-NOI Form B - Note 21)

NA Alteration of this item will result in the invalidation of the authorization statement(s).

a. This statement authorizes the named individual or any individual occupying the named position of the company/organization listed below to act as our representative to process the required CWB-NOI Form for coverage under the NPDES general permit to discharge to State waters from the subject facility. The Owner hereby agrees to comply with and be responsible for all NGPC conditions.

Company/Organization Name: _____

Mailing Address: _____

City, State and Zip Code+4: _____

Street Address: _____

City, State and Zip Code+4: _____

Authorized Contact Person & Title: _____

Phone No.: (___) _____ Fax No.: (___) _____

NA b. This statement authorizes the named individual or any individual occupying the named position of the company/organization listed below to act as our representative to process the required CWB-NOI Form for coverage under the NPDES general permit to discharge to State waters from the subject facility. Our representative is further authorized to fulfill all conditions of the NGPC. The Owner hereby agrees to comply with and be responsible for all NGPC conditions.

Company/Organization Name: _____

Mailing Address: _____

City, State and Zip Code+4: _____

Street Address: _____

City, State and Zip Code+4: _____

Authorized Contact Person & Title: _____

Phone No.: (___) _____ Fax No.: (___) _____

NA c. This statement authorizes the named individual or any individual occupying the named position of the company/organization listed below to act as our representative to fulfill all conditions of the NGPC for the subject facility. The Owner hereby agrees to comply with and be responsible for all NGPC Conditions.

Company/Organization Name: _____

Mailing Address: _____

City, State and Zip Code+4: _____

Street Address: _____

City, State and Zip Code+4: _____

Authorized Contact Person & Title: _____

Phone No.: ( ) _____ Fax No.: ( ) _____

NA d. ☐ A separate statement is attached.

22. Certification (see Guidelines for CWB-NOI Form B - Note 22)

Alteration of this item will result in the invalidation of this CWB-NOI Form submittal. **The person certifying this CWB-NOI Form must meet one of the following descriptions and be employed by the owner listed in Item 1.**

- [ ] I certify that for a municipal agency, I am a principal executive officer or ranking elected official.
- [ ] I certify that for a state agency, I am a principal executive officer or ranking elected official.
- [ ] I certify that for a non-federal public agency, I am a principal executive officer or ranking elected official.
- [X] I certify that for a federal agency, I am the chief executive officer of the agency, or I am the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- [ ] I certify that I am a general partner for a partnership.
- [ ] I certify that I am the proprietor for a sole proprietorship.
- [ ] I certify that for a corporation, I am the President, Vice President, Secretary, or Treasurer of the corporation and in charge of a principal business function, or I perform similar policy or decision making functions for the corporation:
- [ ] I certify that for a corporation, I am the Manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), and authority to sign documents has been assigned or delegated to me in accordance with corporate procedures.
- [ ] I certify that for a trust, I am a trustee.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 20 September 2002

Printed Name & Title: Stewart Fearon, Major, U.S.Army Reserve, ADCSENG

Company/Organization Name: Headquarters, 9th Regional Support Command

Phone No.: (808) 438-1600x3254 Fax No.: (808)438-7473

CWB-NOI Form B Checklist			
If any item (except for Item 20) is listed as "no," attach a sheet with the reason for its exclusion from the CWB-NOI Form B submittal.			
Item Number	**Description**	**Is info. provided?**	
		yes	**no**
1.	Owner Information	X	
2.	Owner Type	X	
3.	Operator Information	X	
4.	Facility Information	X	
5.	Receiving State Water(s) Information	X	
6.	Quantity of Storm Water Discharge	X	
7.	Non-Storm Water Discharge Information	X	
8.	Location map is attached	X	
9.	Flow chart is attached	X	
10.	Existing or Pending Permits, Licenses, or Approvals	X	
11.	NGPC Renewal	X	
12.	Automatic Coverage Under General Permit	X	
13.	North American Industrial Classification System (NAICS) United States Structure Codes	X	
14.	Facility Site Map is attached	X	
15.	Storm Water Pollution Control Plan (SWPCP)	X	
16.	Multiple Outfall Information	X	
17.	Physical Storm Water Runoff Quality	X	
18.	Water Quality Parameters	X	
19.	Toxic Parameters	X	
20.	Additional Information	X	
21.	Authorization of Representative	X	
22.	Certification	X	
23.	Filing Fee ($500.00) is attached	X	
24.	Number of copies with supporting documents submitted		
	One (1) copy for facilities on Oahu with owner's original signature		
	Two (2) copies for facilities on islands other than Oahu (one with owner's original signature)	X	
25.	Submit one (1) copy to the Department of Land and Natural Resources, State Historic Preservation Division.	X	

FACILITY RE-EVALUATION

UNITED STATES ARMY RESERVE FACILITY

SFC MINORU KUNIEDA USARC
HILO, HAWAII

7-8 March 1994

HQDA INSTALLATION NUMBER: 15900

PREPARED BY: ***416th Engineer Command***
Engineer Support Group - West
Building 35 Room 401
San Francisco, CA 94129-7000
Phone (415) 561-5733
FAX (415) 561-3603

TEAM MEMBERS: ***Maj. Ken Morris***
Maj. Alex Kozlov
Cpt. Jim Valenzuela
1Lt. Aaron Hakimi

416TH ENGINEER COMMAND
USAR FACILITY EVALUATION

INSTALLATION NAME: KUNIEDA USARC

INSTALLATION NUMBER: 15900 DATE: 7-8 March 1994

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SECTION	DESCRIPTION
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2.	USAR FACILITY IDENTIFICATION
3.	FACILITY DATA
4.	GRAPHICAL DATA
A.	VICINITY MAP
B.	LOCATION MAP
C.	SITE MAP
D.	BUILDING FLOOR PLAN
5.	EXISTING CONDITIONS PHOTOGRAPHS
A.	EXTERIOR PHOTOGRAPHS
6.	UNCONSTRAINED WORK REQUIREMENTS SUMMARY
A.	MAINTENANCE AND REPAIR REQUIREMENTS
B.	MINOR CONSTRUCTION/ALTERATION REQUIREMENTS
C.	OTHER ENGINEER SERVICES REQUIREMENTS
D.	FACILITY ENGINEERING WORK REQUEST (DA FORMS 4283)

SECTION 1- EXECUTIVE SUMMARY

INSTALLATION NAME: KUNIEDA USARC

INSTALLATION NUMBER: 15900

A. GENERAL DESCRIPTION OF THE FACILITY:

The SFC MINORU KUNIEDA USAR Center is located at 470 West Laikaula Street in the City of Hilo, Hawaii. The USAR Center is located on a 3.3 acre government owned site, across from the University of Hawaii Campus. The facility includes a 1) a unit administration building 2) a Unit Assembly Hall, 3) an OMS Facility with a unit vehicle maintenance shop, 4) a wash rack and 5) military and POV parking areas. The KUNIEDA USARC was constructed in 1964 and expanded in 1977 and 1979.

The KUNIEDA USARC is bounded on the west by vacant land used for flood control, on the east by the University of Hawaii, on the north by a YMCA and on the south by a pre school.

The 150 soldier KUNIEDA USARC is occupied by an Engineer Platoon, Company A, 411th Engineer Battalion and Detachment 1, Company B, 100th Battalion, 442d Infantry and the Hilo Detachment of the 1085th Training Exercise Maneuver Group. Approximately 96 soldiers drill at the center one weekend a month. Four soldiers work full time at the USARC.

B. LOCATION AND TYPE OF FACILITY

KUNIEDA USARC is comprised of three buildings as described above. The facility, in general, is in very good condition and has been well maintained. Several construction issues are outstanding and are contained in a contractors "punch list" from Contract No: DACA83-92-C-0070, FY92 OMAR Package 0-22, enclosed in para 6B. The Facility Manager has not been successful in getting the contractor to complete the punch list. Other than this punch list no other serious maintenance issues are apparent.

1. The Administration Building is used for traditional office space, contains the Arms Room and two class rooms. The building is concrete masonry construction with a built up asphalt composition roof. The roof is in new condition. The total area of the Administration Building is 5,319 sq ft.

2. The Unit Assembly Hall contains the kitchen, hot water storage tank, unit equipment storage areas and a locker room. The building is concrete masonry construction with a steel framed sheet metal roof. The total area of the Assembly Hall is 7,224 sq ft.

3. The OMS Facility has a single repair bay, offices and a ventilated battery storage room. The construction is concrete masonry with a built up asphalt composition roof. The total area of the OMS Facility is 1,920 sq ft.

4. The motor park has a vehicle repair area with overhead cover.

5. A new hazardous material storage facility has been installed in the motor park area. The facility is state of the art. During this survey, the utility connections were being completed.

6. The site has the facility to store twenty five (25) vehicles on outdoor hardstand with overhead cover. There is room for another forty (40) vehicles to be stored in an outdoor gravel area without overhead cover.

C: GEOGRAPHICAL AND SOCIO ECONOMIC SETTING

KUNIEDA USARC is located on Hilo, Hawaii approximately 4 miles from the Hilo

Airport. The USARC is in a residential area and blends in well with the surroundings. The residential area is comprised of local, working class homes is good condition. The surrounding area is safe and has much daily activity. KUNIEDA USARC is located on slightly elevated terrain with adequate drainage. Hilo receives heavy, almost daily rainfall.

AIR: No apparent negative environmental impact.

WATER DRINKING: Drinking water is provided through the local water utility. By inspection, the drinking water is potable and no ill effect among the occupants has been detected.

WATER RUNOFF: Due to the heavy rains roof drains are connected directly to the storm drain system. Site drainage is adequate with the exception of a clogged drain on the unused wash rack. The Facility Manager will submit a work order to fill the clogged drain with concrete and divert the site drainage to adjacent storm drains. The site drainage is otherwise good.

SANITARY SEWER DISCHARGE: No apparent negative environmental impact.

ELECTRICAL: No apparent negative environmental impact.

GAS: n/a

D. AESTHETICS OF FACILITY:

KUNIEDA USARC is in good condition and provides for the requirements of the tenants. Due to the heavy rainfall the building roofs require periodic attention to eliminate leaks and minimize follow on damage. All mechanical and electrical systems operate, building exteriors, windows and doors are in good condition, the site and landscaping is well maintained and the building interior is in good condition. There are several items that require repair or maintenance. Specific information regarding these items are identified in para 6A and 6B.

E. ENVIRONMENTAL

An environmental assessment was conducted concurrently with this facility evaluation. No major items of concern were observed, however several minor findings were found. In general, the facility practices good environmental awareness and hazardous material handling. The installation of the hazardous material storage facility will be instrumental for continued good practices. Refer to the ECAAR conducted by the ESG-W for additional information.

F. ASSIGNED UNITS

Engineer Platoon, A Co, 411th Engineer Bn	40 Auth 52 Assigned
Detachment, B Co, 100 Bn, 442d Inf	21 Auth 30 Assigned
Detachment, 1085th TEMG	2 Assigned

G. FUNCTIONAL ISSUES

No major functional issues are apparent. Several work orders have been generated and are included in Section 6.

SECTION 2-USAR FACILITY IDENTIFICATION

INSTALLATION NAME: KUNIEDA USARC

STREET ADDRESS: 470 W. Lanikaula St
Hilo, HI 96720

HQDA INSTALLATION NUMBER: 15900

SUPPORT INSTALLATION: FORT SHAFTER

MUSARC: IX CORPS CONUSA: WESTCOM

TYPE FACILITY: USAR CENTER

EVALUATION PERFORMED BY: Maj Alex Kozlov
416th ENCOM, ESG-West
Bldg 35, Rm 401
Presidio of San Francisco
San Francisco, CA, 94129-7000
(415) 561-5733

PERSONNEL CONTACTED ON SITE:

NAME/GRADE	DUTY POSITION	PHONE NUMBER
Cpt Richard Takeshita	Facility Manager	(808) 935-4257/9288
SFC Lloyd A. Smith	Ops/Trng NCO	
SFC Paul Hacker	Admin NCO	
Mr Eugene Silva	AMSA Shop	

EVALUATION CONDUCTED: 7-8 March 1994

DATE OF LAST EVALUATION: 22 March 1988

SECTION 3-USAR FACILITY DATA

FACILITY NAME: KUNIEDA USARC

1. BASIC DATA:

NUMBER OF BUILDINGS ON SITE: Three (3)

BUILDING NUMBERS: Administration Building
Assembly Hall (Mess Hall)
OMS Facility (Motor Pool)

GROSS SQUARE FEET OF BUILDINGS ON SITE: 14,463 sq ft

Administration Building	5,319 sf
Assembly Hall	7,224 sf
OMS Facility	1,920 sf
Total	14,463 sf

SQUARE YARDS OF PAVED SURFACE: POV: 2275 SY; MEP: 811 SY

SIDE WALKS: n/a TOTAL: 3086 SY OF PAVED SURFACE:

FLOOD PRONE AREA: NO (if drainage continues to be good)

ACRES OF GROUNDS:
IMPROVED: 3.3 ACRES UNIMPROVED: 0.25 ACRES

2. OWNERSHIP DATA: All buildings and land are owned by the US government.

3. ACQUISITION DATA: n/a

4. RECURRING NON-TRAINING ACTIVITIES: none

5. ENVIRONMENTAL DATA: LAST ECAAR ASSESSMENT: 26 February 1993

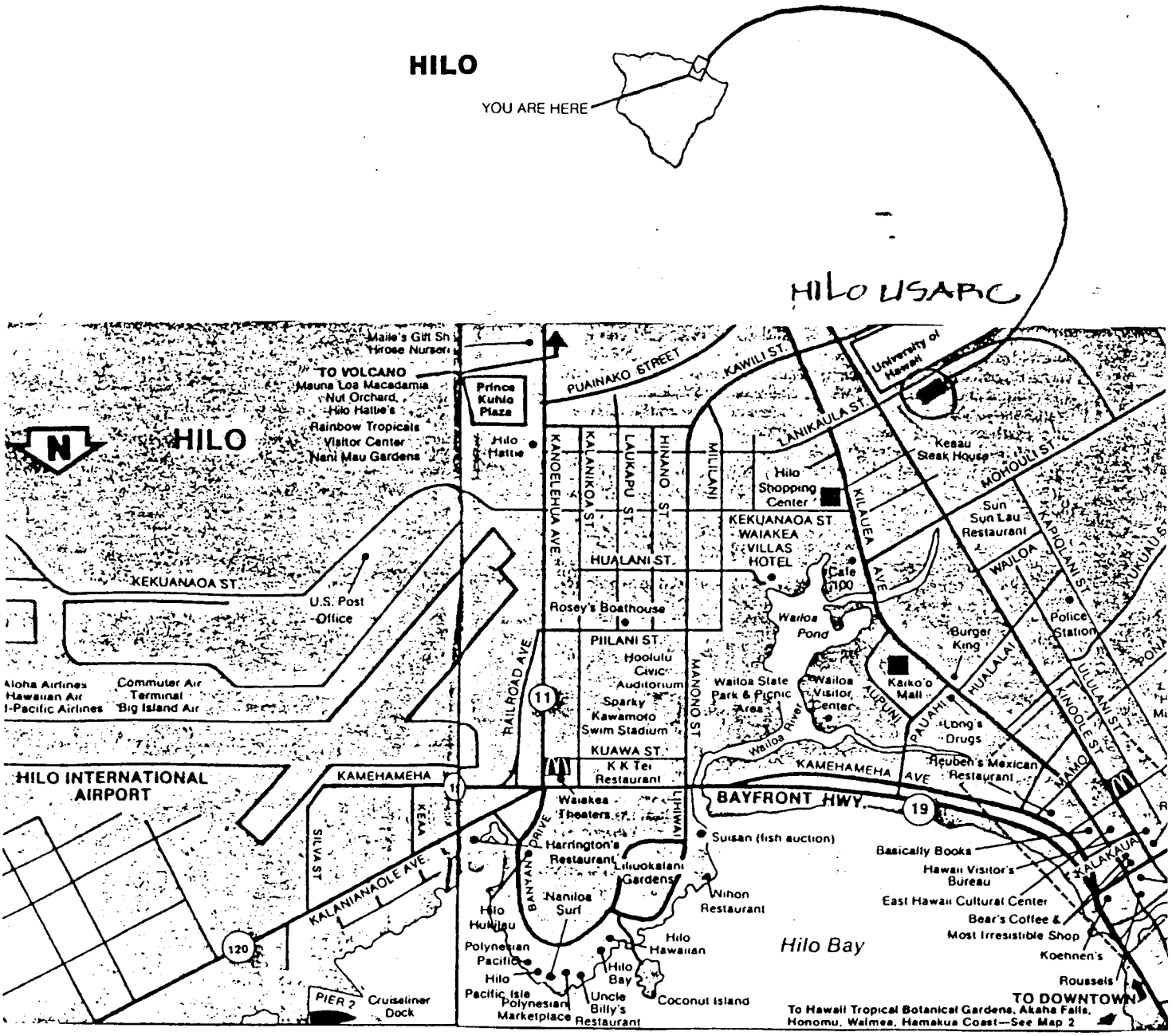
FLOOD PRONE AREA: NO WETLANDS: NO

6. TOTAL NUMBER FULL TIME EMPLOYEES: 4

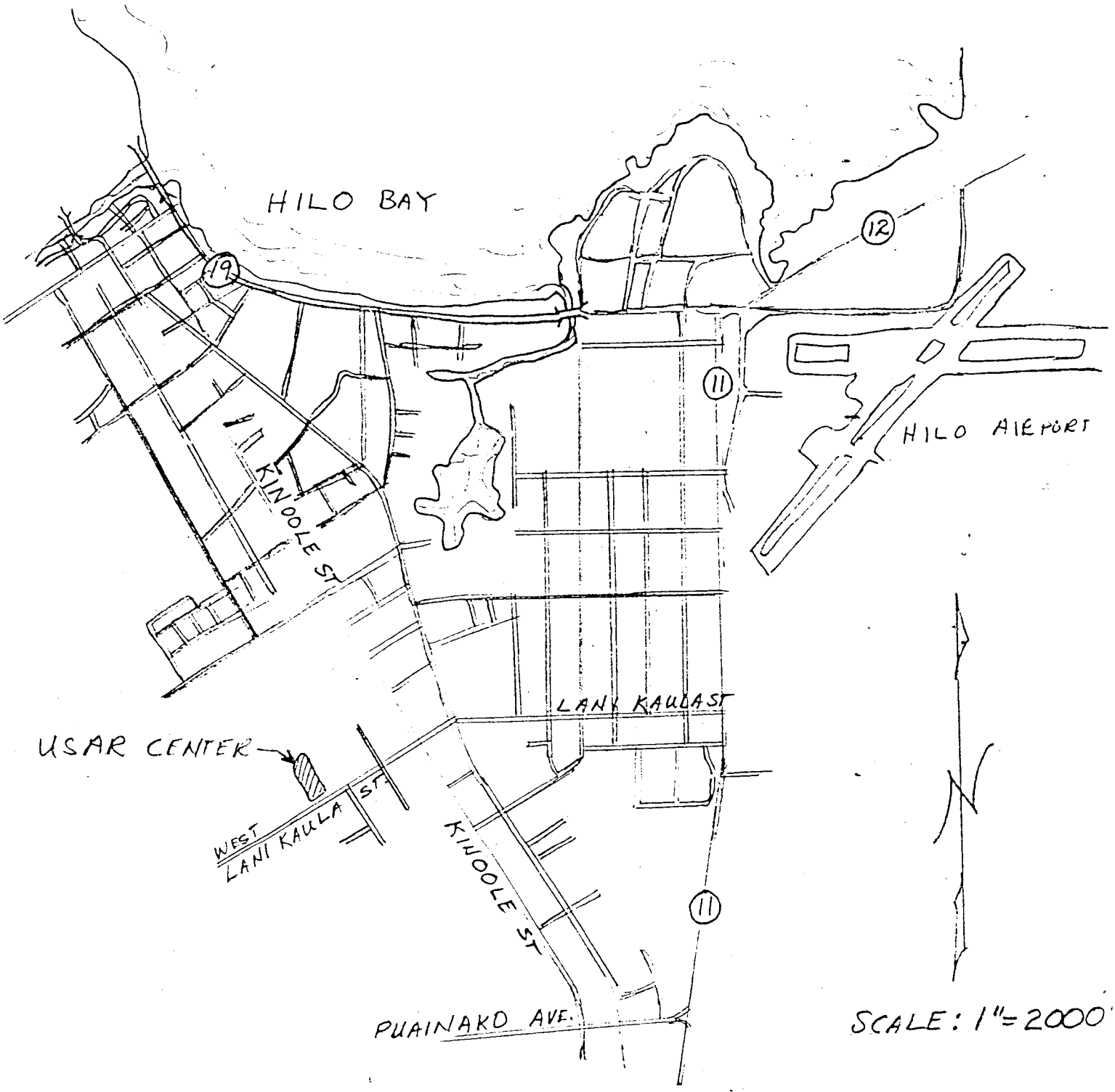
SECTION 4.A.- VICINITY MAP

416th Engineer Command
Facilities Engineering
USAR FACILITY SURVEY

Installation KUNIEDA USARC
Installation No. 15900
Location HILO, HI
Date 22 MARCH 1988



SECTION 4.B.- LOCATION MAP



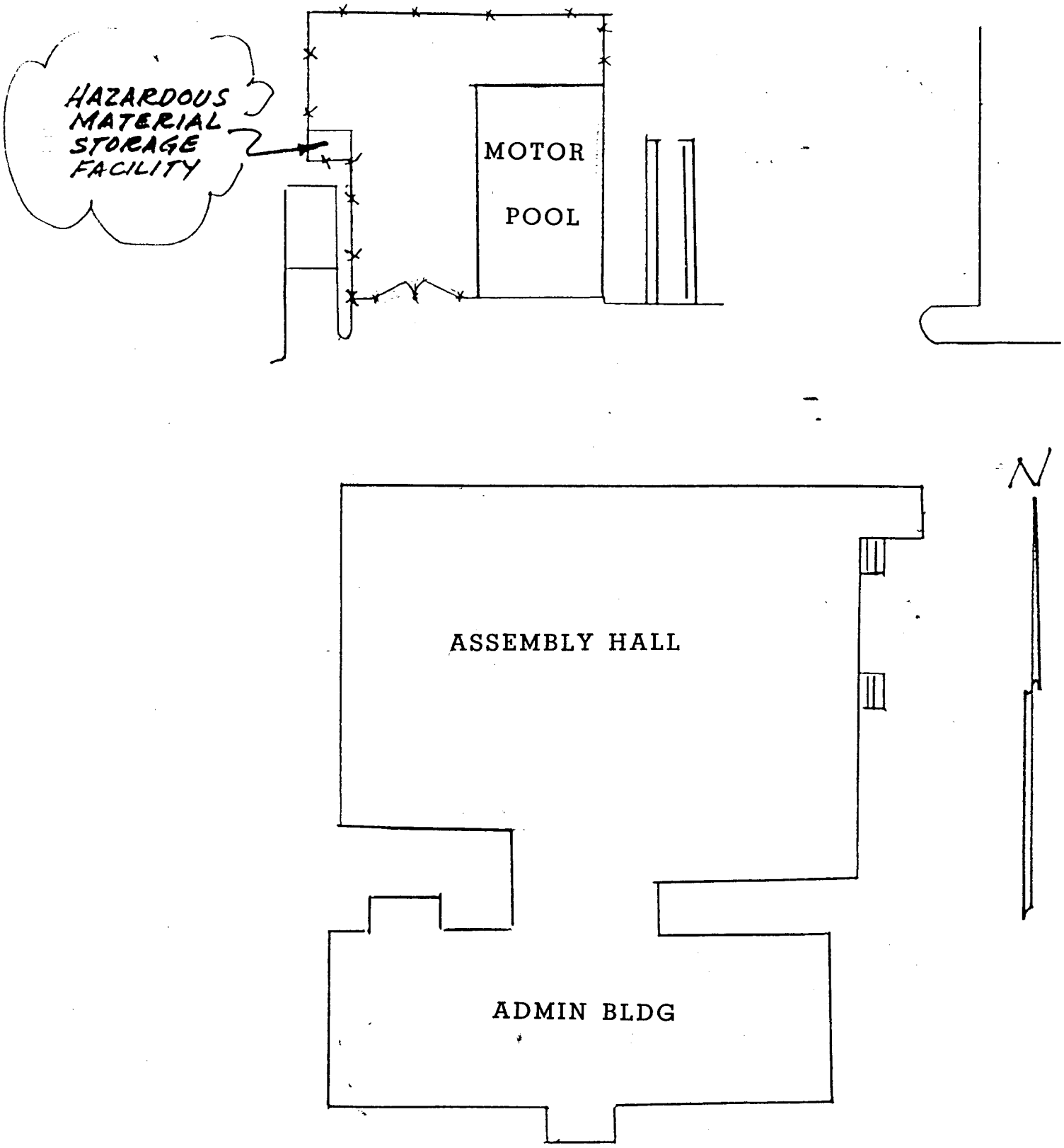
LOCATION MAP, SFC KUNIEDA USARC

HILO, HAWAII

SECTION 4.C.- SITE MAP

HILO USARC

SITE PLAN

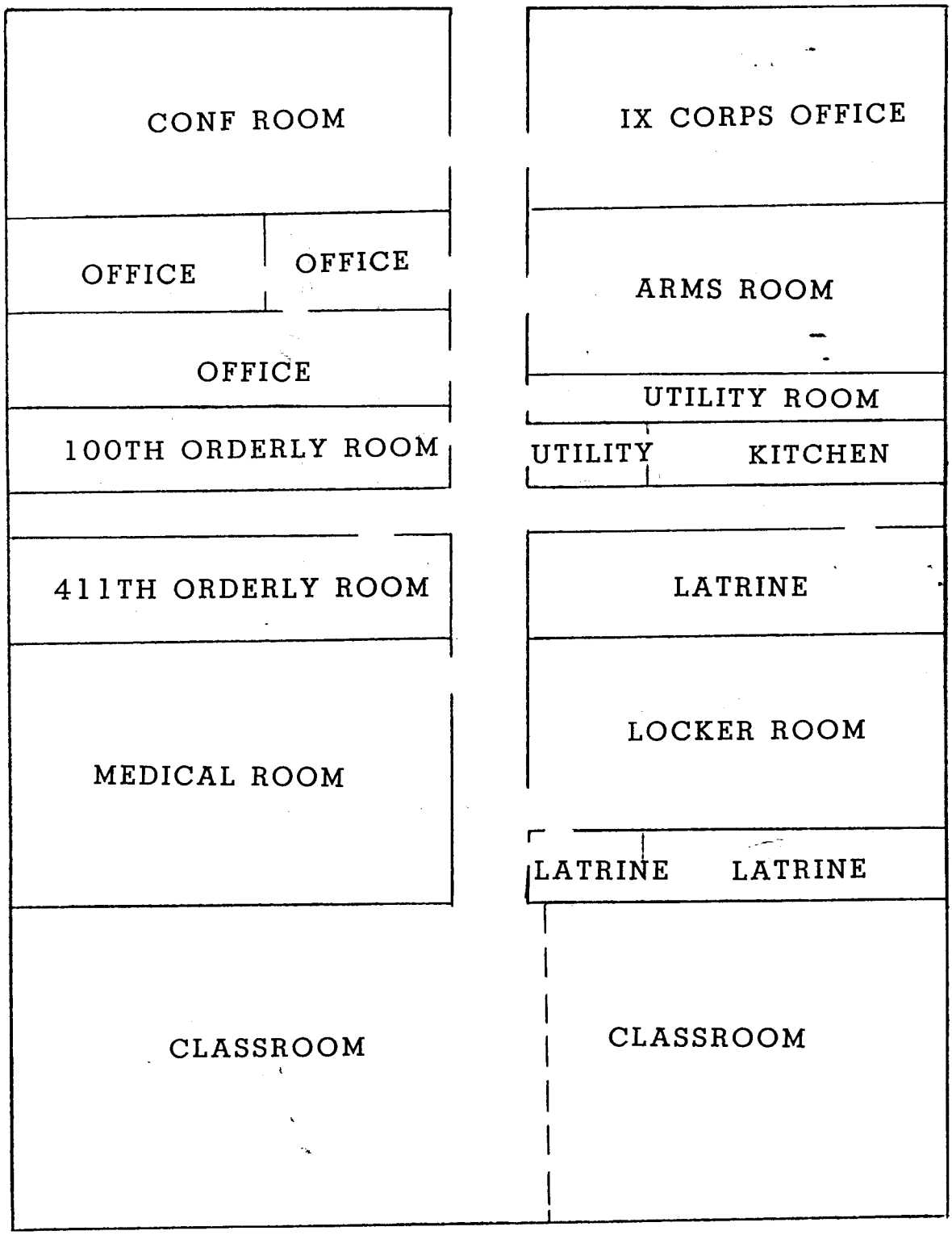


SECTION 4.D.- BUILDING FLOOR PLAN

HILO USARC

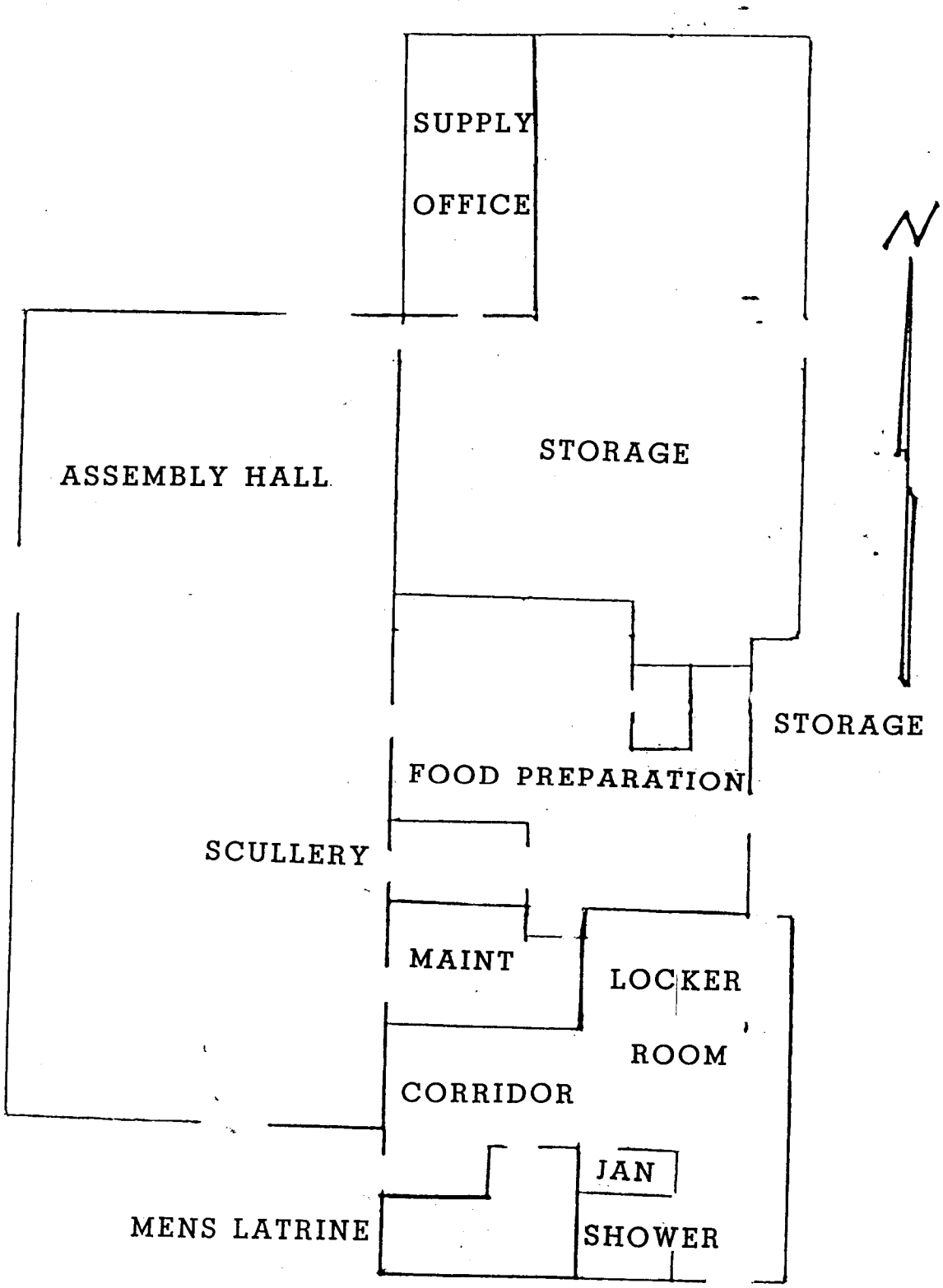
NORTH

ADMINISTATION FLOOR PLAN



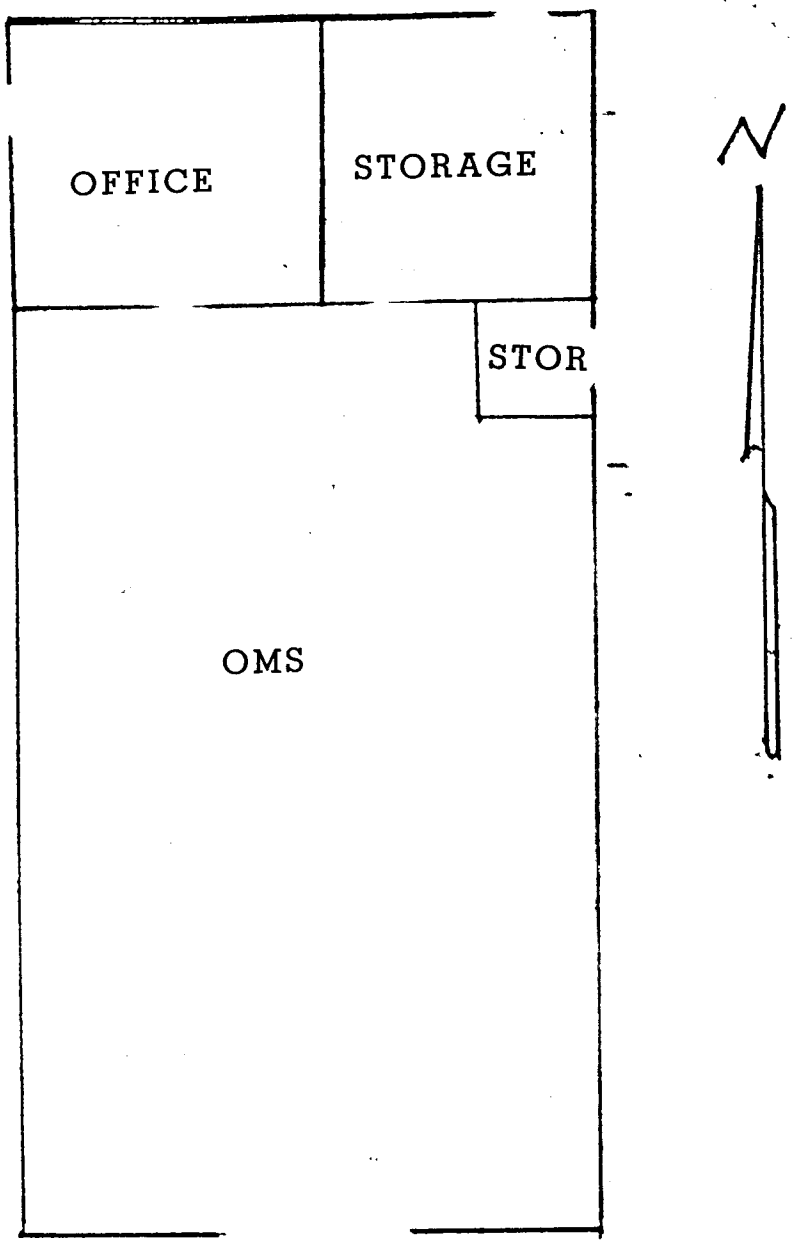
HILO USARC

ASSEMBLY BUILDING



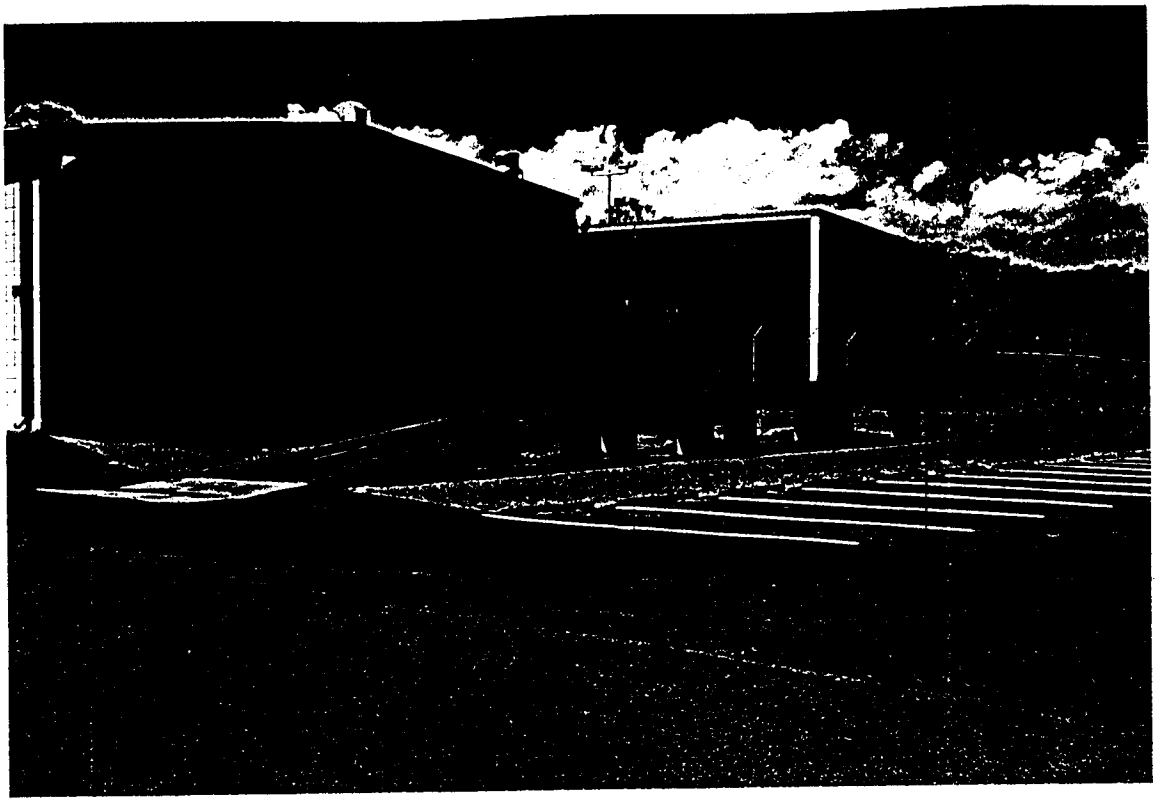
HILO USARC

MOTOR POOL PLAN



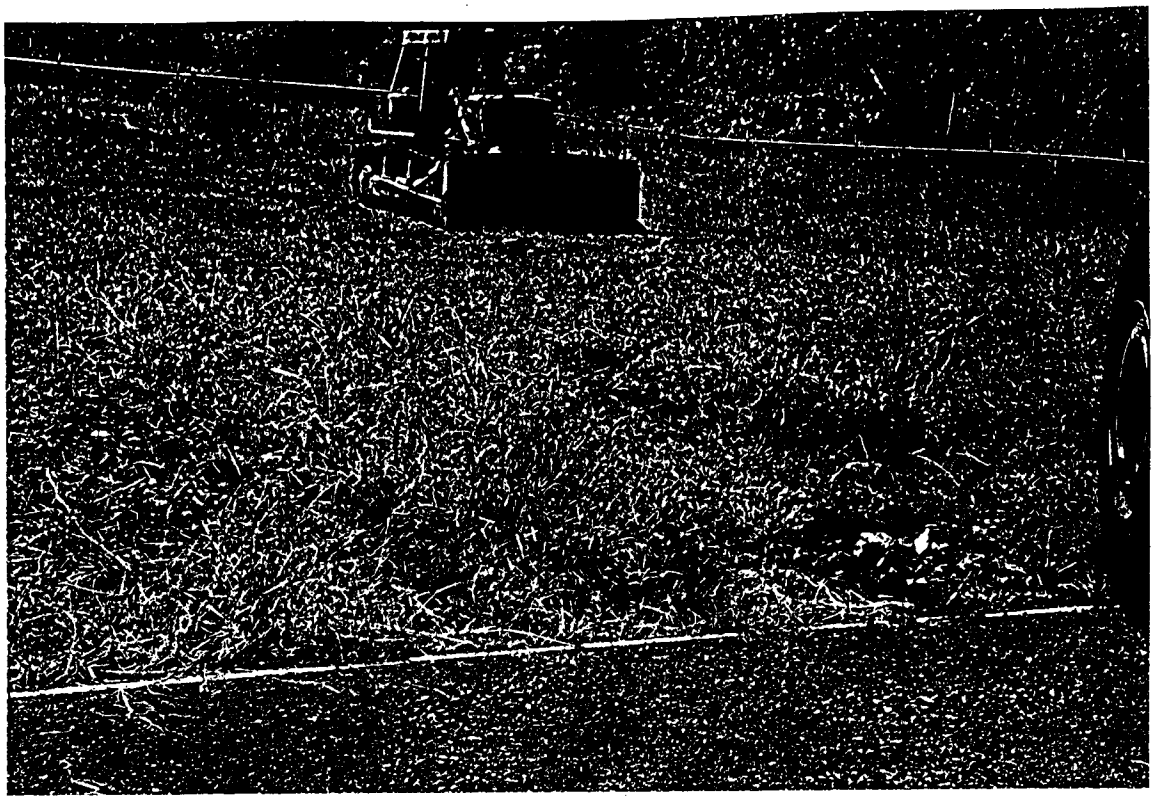
SECTION 5. PHOTOGRAPHS

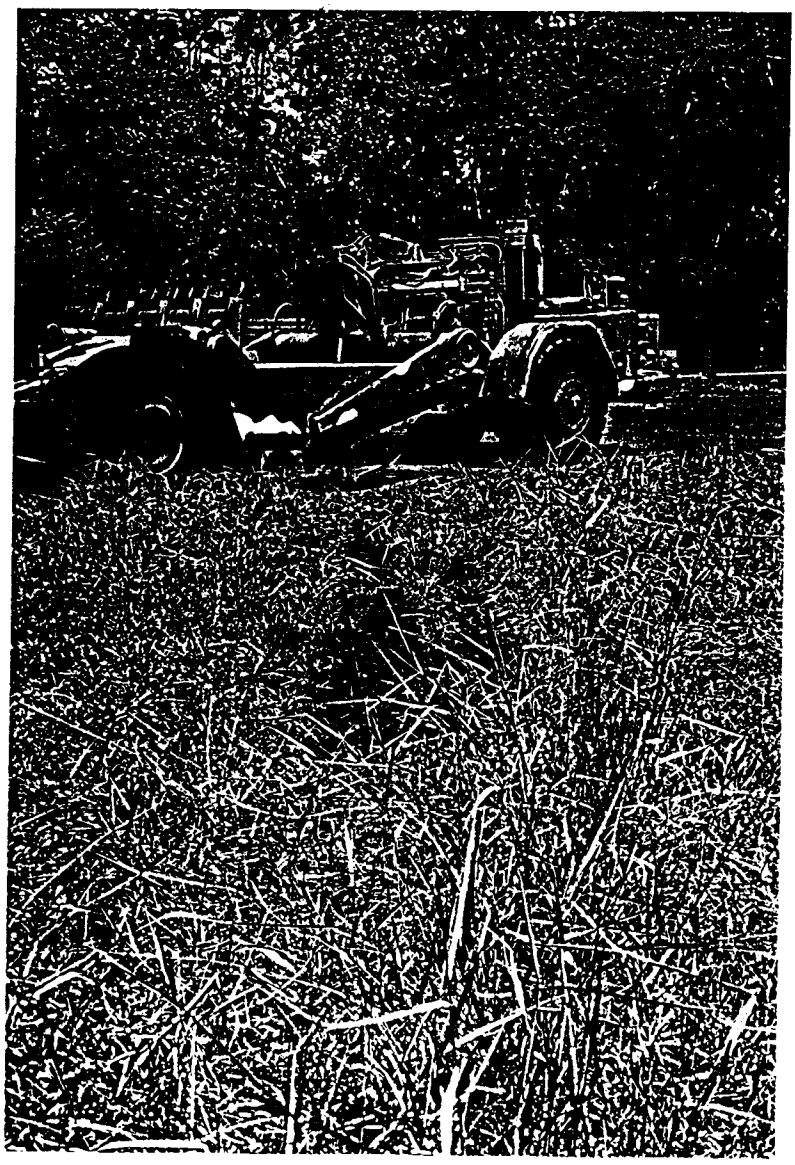
USARC, HILO, HI



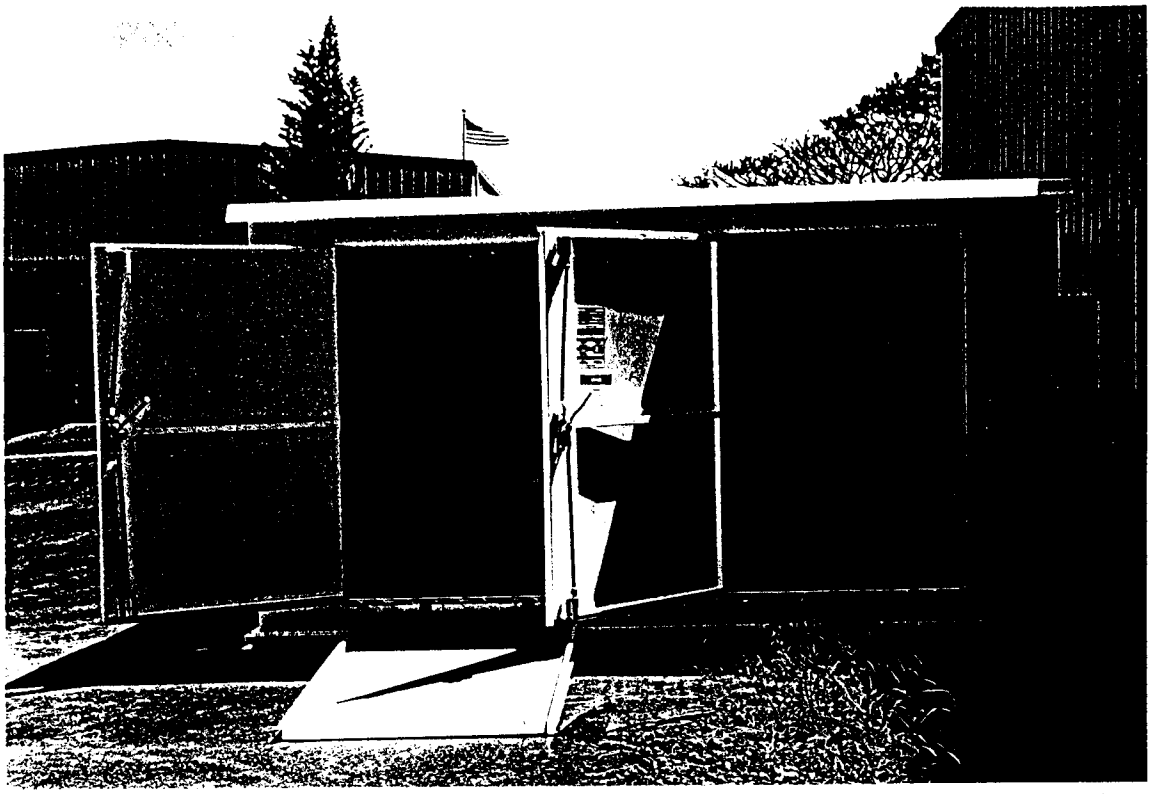
UNUSED OIL CHANGE RAMP

OMS COVERED PARKING

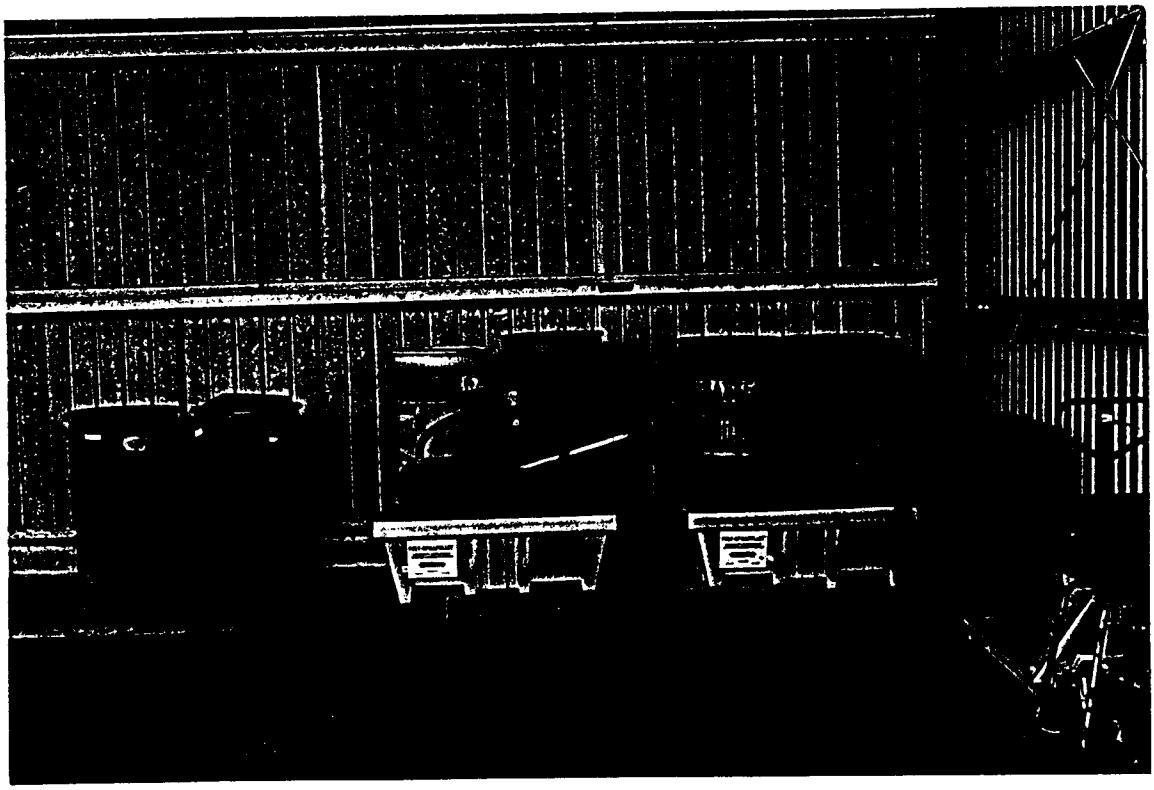


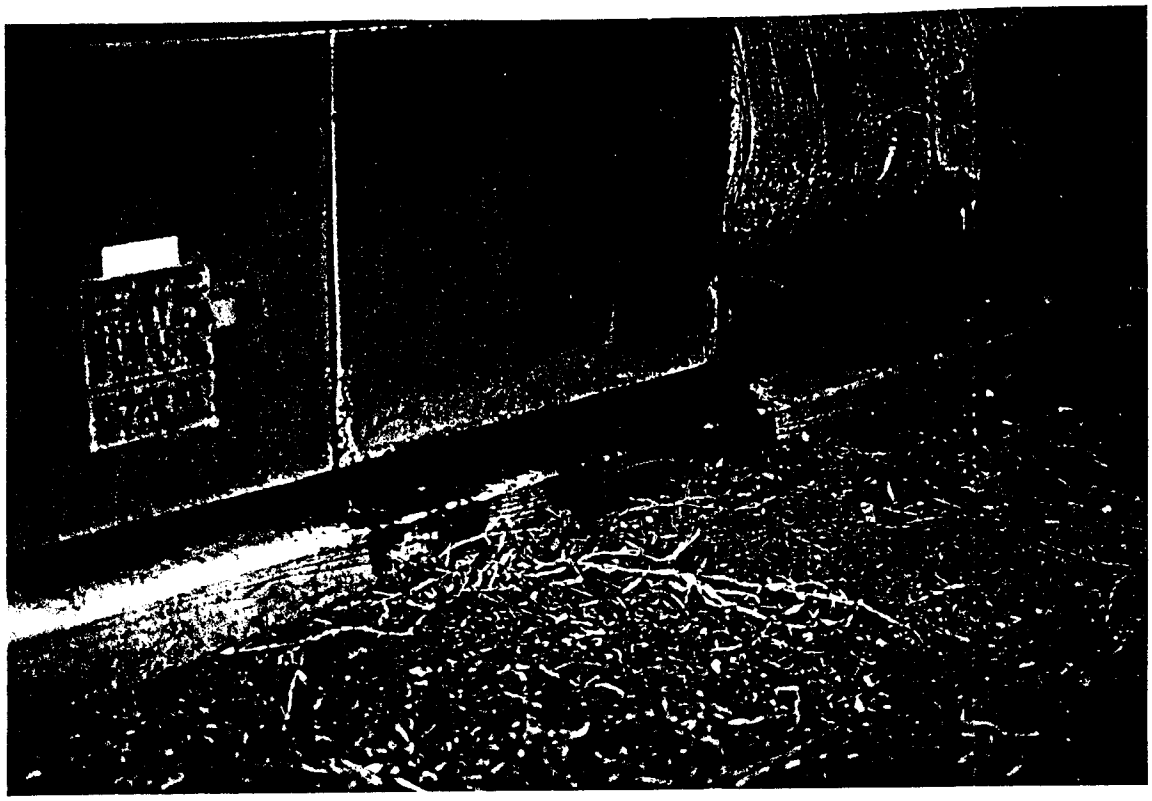


DIESEL
FUEL
SPILL

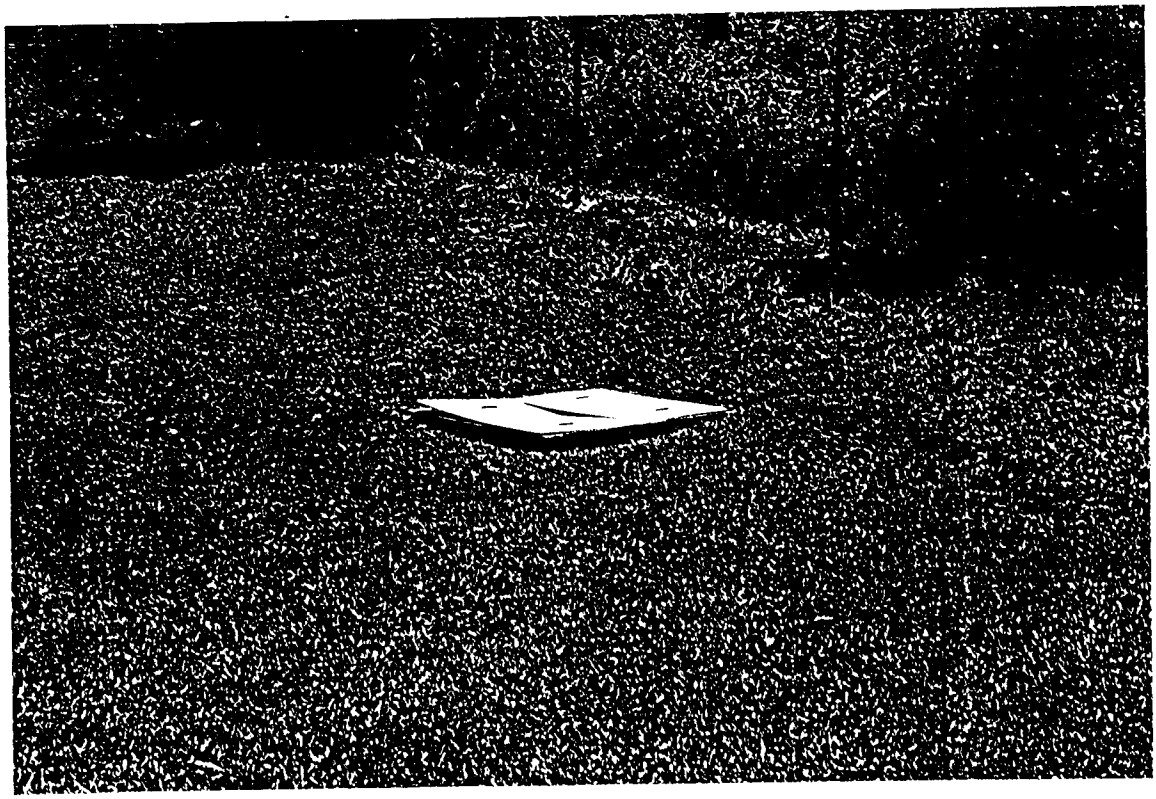


HAZMAT
STORAGE





LEAKING DRAIN PAN ON A/C UNIT



MAIN WATER CUTOFF COVER

SECTION 6 - UNCONSTRAINED SUMMARY OF WORK REQUIREMENTS SUMMARY.

INSTALLATION NAME: KUNIEDA USARC

INSTALLATION NUMBER: 15900

UNCONSTRAINED WORK REQUIREMENT:	ESTIMATED COST:
Previously identified maintenance & repair	Not Compiled
Newly identified maintenance & repair	Service Contracts
Previously identified minor construction and alteration	Not Compiled
Newly identified minor construction and alteration	
Previously identified other engineering services	Not Compiled
Newly identified other engineering services	Not Compiled
TOTAL UNCONSTRAINED RPMA REQUIREMENTS:	

Outstanding Work Order Inventory Enclosed

WORK ORDER INVENTORY

Work Order No.	Request Date	Description of Work
Existing Work Request:		
MB401213P	930630	FY94 M&R FIRE SUP SYS
MB400540P	891201	INST EXIT SIGN&EGRESS LIGHT
MB400611P	901206	HAZARDOUS MAT STORAGE BLDG
MB401223P	930630	WASTE OIL REMOVAL
MB401132P	920816	INSTALL A/C UNIT
MB401233P	930706	FY94 PEST CONTROL SERVICES
MB401243P	930706	GREASE TRAP CLEANING
MB400882P	911127	INSTALL CAGING
MB400661P	910416	INSTALL REBAR
MB400651P	910416	INSTALL SECURITY LIGHT
MB400892P	911209	INSTALL SECURITY GRILL
MB400842P	911127	INSTALL SECURITY SCREEN
MB400108P	880809	IMPROVE WINDOW PHYSICAL SEC
MB401002P	920521	REPIN LOCKS AND REPLACE LOC
MB400601P	901206	ROOFING & OTHER MISC RPRS
MB400822P	911122	PERIMETER FENCING
MB400520J	900306	INST SHED ROOF
MB400852P	911127	INSTALL VENTILATION
MB401072P	920701	INSTALL VENTILATION FAN
MB400782J	911120	REPLACE RESTROOMS LIGHTS
MB400772J	911120	REPLACE CLASSROOM LIGHTS
MB401012P	920513	PAINT INTERIOR WALLS
MB401032P	920601	RPL FLOOR TILES MAINT OFC
MB400872P	911127	PAINT SUPPLY OFFICE
New Work Request:		
MB 4	940308	AIR CONDITIONING UNIT
MB 4	940308	WASH RACK DRAIN
MB 4	940308	INSTALL OIL WATER SEPERATOR

SECTION 6-A MAINTENANCE AND REPAIR REQUIREMENTS.

Facility:

ITEM NO.	REQUIRED MAINTENANCE
	Clean out and maintenance of grease trap for mess hall
	Service air conditioning units, replace filters and-clean condenser coils (DA 4283 completed)
	Repair cover over main water cutoff (outdoors). Part of OMAR punchlist

SECTION 6-B MINOR CONSTRUCTION/ALTERATION REQUIREMENTS.

FACILITY:

WORK ORDER NUMBER	BUILDING NUMBER	WORK DESCRIPTION	ESTIMATED COST ($000)
	Site	Fill existing unused washrack site storm drain and divert runoff (DA 4283 completed)	
	Admin Bldg	Repair, clean and seal condensate drain pan of outdoor air conditioning unit. (DA 4283 completed)	
	Site	Punch List (enclosed) for Contract No: DACA83-92-C-0070, FY92 OMAR Pkg 0-22	
	Admin Bldg	Install weather stripping on all exterior doors. Install door closers on four doors.	
	Site	Install oil water separator for motor pool (DA 4283 complete)	
		TOTAL ESTIMATED COST:	

Discussion:

1. Existing washrack is not being used as a washrack. The existing "drain" does not function and collects water until it overflows. This "drain" should be filled in and sealed to prevent accumulation of debris and bacteria in standing water. Approximate cost: less the $1,000.00

2. Existing 3 ton AC unit serving the two west offices shows major condensate drain pan leaks. The severe leak has resulted in approximately 20 sq ft of bacteria and mildew growth under the unit. This bacteria is being introduced to the indoors. The unit could be easily repaired, sealed and leveled. Approximate cost: less than $700.00

3. There is no weather strip on any exterior doors. Four doors do not have closers. Installation of weather strip and closers will allow the marginal air conditioning to work more efficiently and save utility costs. Approximate cost: less than $500.00.

Takeguchi
st/3-6894

CEPOH-HA-ST-0109

2 Feb 94
DATE

~~Brady~~ Trng
CEPOH-HA-ST

Seth SW
CEPOH-HA-S

MEMORANDUM FOR RECORD

SUBJECT: Contract No. DACA83-92-C-0070, FY92 OMAR Pkg 0-22, Various Repairs and Upgrade, USARC, Hilo, HI

~~CF:~~
~~TPO~~ File
TPO Jobsite
CEPOD-CT-C
(Steve)

RE: (~~[illegible]~~) (Final Inspection)

1. The present contract completion dated is July 28, 1993.

2. Construction was substantially completed on January 6, 1994.

3. Final inspection will be held on January 6, 1994.

4. Deficiencies (if any) will be corrected by March 1994.

5. This is a(n) (final) (~~[illegible]~~) turnover.

6. Attendance List:

   Refer to Enclosure #1

7. Key Receipt (if applicable) by _____ of C.I. Pending.

8. Deficiencies and/or remarks:

   Refer to Enclosure #2

Encls

Signed
Government Representative
Construction Representative

CF:
CEPOD-CT-C
TPO IB File
TPO Jobsite File
CEPOH-HA-MS
APVG-GWJ
Contractor
Hukilau Construction Inc.
94 Kalanianaole Avenue
Hilo, Hawaii 96720

ROSTER OF CONFERENCE ATTENDEES

CONFERENCE Partial Final Inspection

DATE January 6, 1994 PLACE USARC, Hilo, HI TIME 0700

NAME (PLEASE PRINT)	ORGANIZATION	TELEPHONE
Steven Takeguchi	CEPOH-HA-ST	4336894
Ray Nakamoto	Hukilau	9357767
Eugene K Silva	USARC	9359280
Gilbert Kahele	DPW	969-2435

DOD FORM 62
17 JULY 1970

AL FINAL INSPECTION PUNCHLIST JAN. 6, 1994

ENANCE SHOP:

EYE WASH

a. BOLT RUSTY AT BASE PLATE

b. RUSTY CHAIN ON FOOT LEVER

c. BACKFILL OVER WATERLINE WITH TOPSOIL

? d. MISSING 90° ELBOW AND 1 1/4" DRAINPIPE

2. BATTERY ROOM

a. SILENCERS MISSING ON DOOR JAMB

b. 2 - KEYS REQUIRED.

? c. EXHAUST FAN — NO POWER

? d. NOTE EXHAUST FAN BREAKER ON PANEL "MF" DIRECTORY

B. MAINTENANCE SHED

1. HPS LIGHT FIXTURES (3-ea.) MISSING MOLDED VIRGIN ACRYLIC LENS

? 2. MISSING HAZARDOUS WASTE STORAGE BUILDING

C. CANOPY "A"

? 1. TOPSOIL ALONG BACK OF BLDG ALONG SLOPED AREAS

? 2. COMPLETE FENCING AS REVISED.

? 3. TOUCH-UP RUST ON SOUTH SIDE WALL SIDING. ONE AREA MIDWAY UP PANEL AND ANOTHER AREA FROM FRONT COLUMN ALONG BOTTOM EDGE OF SIDING WHERE IT MEETS CONCRETE WALLS

4. RESET FOAM CLOSURES AT FLASHING — (DAYLIGHT CAN BE SEEN THRU)

opy "B"

TOUCH-UP RUST ON SOUTH SIDE WALL SIDING FROM FRONT COLUMN ALONG BOTTOM EDGE OF SIDING WHERE IT MEETS. CONCRETE WALLS.

? 2. BACKFILL BEHIND RETAINING WALL AND CLEAN-UP RUBBISH

~~3.~~ REPLACE SHORT ROOFING ON SOUTH OF OF CANOPY

~~4.~~ RESET FOAM CLOSURES AT FLASHING-(DAYLIGHT CAN BE SEEN THRU)

E. APPROXIMATELY 4- PARKING STALL STRIPING MISSING IN FRONT OF FLAMMABLE STORAGE CONTAINERS.

F. ADMINISTRATION BLDG #1

? 1. EXIT LIGHT BASE LOOSE/FLUSH WITH CEILING AT MIDDLE OF CORRIDOR #34, AT DOOR D/1 AND DOOR D/4

2. CLASSROOM #31

~~a.~~ FIX STAGE QUARTER ROUND MOLDING. TOO LONG AT LEFT ~~FRONT CORNER. PAINT WITH 2 COATS OF VARNISH~~ (SOUTH STAGE)

~~b.~~ MISSING 1-LIGHT FIXTURE LENS

~~c.~~ UNISTRUT TO SUPPORT LIGHTS-(IF NEW PAINT)

~~d.~~ STAGE (NORTH SIDE) 2-COATS OF VARNISH REQ'D.

3. TOILET #30

? a. MISSING FLOURESCENT LIGHT FIXTURE

~~b.~~ GFI - OPEN GROUND

VAULT #16

a. FILL GAP BETWEEN TOP OF SECURITY SCREEN ANGLE AND CONCRETE CEILING

Completed Needs paint

~~b. ANCHOR BOLT (1-ea.) MISSING BEHIND LEFT GATE HINGE SIDE.~~

c. TURN-IN 2-LOCKS AND 4-KEYS (2-KEYS PER LOCK)

5. CORRIDOR #34

Completed Needs Varnish

a. ~~TROPY CASE MISSING~~

b. TOUCH-UP PAINT AT DOOR JAMBS IN CORRIDOR FROM VAT ? REMOVAL

G. ASSEMBLY HALL #1

1. UNIT STORAGE

a. PATCH HOLE IN DOOR D/8 THRESHOLD

b. PAINT FRAMING FOR EXHAUST FAN EF-2

2. MAIN HALL

? a. TINT 2-WINDOWS TYPE W/1

NOTE: ALL EQUIPMENT AND LIGHT FIXTURES WILL BE LABELLED WITH WARRANTY STICKERS AS PROVIDED BY GOVERNMENT REPRESENTATIVE

SECTION 6-C OTHER ENGINEER SERVICES REQUIREMENTS.

FACILITY: KUNIEDA USARC

WORK ORDER NUMBER	BUILDING NUMBER	WORK DESCRIPTION	ESTIMATED COST ($000)
		none at this time	
		TOTAL ESTIMATED COST:	

Copies of Contracts Enclosed:

Refuse Collection
Custodial Services and Grounds Maintenance
Cleaning of Oven Grease Filters

SERVICE CONTRACTOR'S PERFORMANCE RATING
(Annex A to Contracting Office SOP 1-82, 15 Sep 82)

DATE: 28 Feb 94

(If necessary attach extra sheets identifying each item by number)

TO: (Include ZIP Code)
DOC, USASCH
Fort Shafter, HI 96858

FROM: (Include ZIP Code)
DFE, HCSD, PTA
Fort Shafter, HI 96858-5000

1. CONTRACT NO.: DAHC77-94-P-0094

2. TYPE OF SERVICES: Refuse Disposal

3. DATE OF CONTRACT: 10/01/93

4. CONTRACT VALUE: $737.88

5. NAME AND ADDRESS OF CONTRACTOR
Business Services Hawaii
500 Kalanianole Ave
Hilo, Hawaii 96858-5025

6. DELIVERY REQUIREMENTS
Refuse Collection/Disposal
Hilo U.S. Army Reserve Center

7. RATING PERIOD: FROM 1 Feb 94 TO 28 Feb 94

8. PERCENTAGE OF COMPLETION: %

9. PERFORMANCE RATINGS (Indicate whether "Satisfactory" or "Unsatisfactory")

FUNCTION	RATING	FUNCTION	RATING
a. COMPLIANCE WITH CONTRACT OPERATING PROCEDURES	S	h. ADEQUACY OF SAFETY MEASURES, INCLUDING FIRE AND ACCIDENT PREVENTION	S
b. ADHERENCE TO SPECIFICATIONS, PLANS, DRAWINGS, AND OTHER TECHNICAL REQUIREMENTS	S	i. CONFORMANCE TO SECURITY REQUIREMENTS	S
c. RESULTS OF GOVERNMENT INSPECTIONS AND TESTS	S	j. SUPERVISION EXERCISED OVER PERSONNEL	S
d. QUALITY AND CONDUCT OF WORK	S	k. PROPER IDENTIFICATION OF EMPLOYEES	S
e. ADEQUACY OF INSPECTIONS PERFORMED BY CONTRACTOR	S	l. ADEQUACY OF PERSONNEL	S
f. ADHERENCE TO WORK OR DELIVERY SCHEDULES	S	m. COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS (Specify)	S
g. ADEQUACY OF FACILITIES, EQUIPMENT AND TOOLS	S		

10. DESCRIPTION OF UNSATISFACTORY PERFORMANCE

11. CORRECTIVE ACTION INITIATED (Describe also degree of compliance by contractor)

12. RECOMMENDATIONS

13. GENERAL PERFORMANCE RATING (Check applicable box)
[XXX] SATISFACTORY [ ] UNSATISFACTORY

14. RATING (Check applicable box)
[ ] INTERIM [ ] FINAL

15. SERVICES UNDER THIS CONTRACT HAVE BEEN RENDERED AS DESCRIBED ABOVE.

16. REVIEWED

SIGNATURE OF RATING OFFICER

SIGNATURE OF CONTRACTING OFFICER'S REPRESENTATIVE

TYPED NAME, GRADE AND ORGANIZATION
RICHARD P. TAKISHITA, CPT
Kuntleda USARC

TYPED NAME, GRADE AND ORGANIZATION
STEVE TROUT, GS9
DPW, HCSD, PTA

APZV Form 42, 1 Dec 83 Previous editions may be used until exhausted.

SERVICE CONTRACTOR'S PERFORMANCE RATING
(Annex A to Contracting Office SOP 1-82, 15 Sep 82)

DATE: 28 Feb 94

(If necessary attach extra sheets identifying each item by number)

TO: (Include ZIP Code)
DOC, USASCH
Fort Shafter, HI 96858

FROM: (Include ZIP Code)
DFE, HCSD, PTA
Fort Shafter, HI 96858-5000

1. CONTRACT NO.: DAHC77-94-P-0094

2. TYPE OF SERVICES: Refuse Disposal

3. DATE OF CONTRACT: 10/01/93

4. CONTRACT VALUE: $737.88

5. NAME AND ADDRESS OF CONTRACTOR
Business Services Hawaii
500 Kalanianole Ave
Hilo, Hawaii 96858-5025

6. DELIVERY REQUIREMENTS
Refuse Collection/Disposal
Hilo U.S. Army Reserve Center

7. RATING PERIOD: FROM 1 Feb 94 TO 28 Feb 94

8. PERCENTAGE OF COMPLETION: %

9. PERFORMANCE RATINGS (Indicate whether "Satisfactory" or "Unsatisfactory")

FUNCTION	RATING	FUNCTION	RATING
a. COMPLIANCE WITH CONTRACT OPERATING PROCEDURES	S	h. ADEQUACY OF SAFETY MEASURES, INCLUDING FIRE AND ACCIDENT PREVENTION	S
b. ADHERENCE TO SPECIFICATIONS, PLANS, DRAWINGS, AND OTHER TECHNICAL REQUIREMENTS	S	i. CONFORMANCE TO SECURITY REQUIREMENTS	S
c. RESULTS OF GOVERNMENT INSPECTIONS AND TESTS	S	j. SUPERVISION EXERCISED OVER PERSONNEL	S
d. QUALITY AND CONDUCT OF WORK	S	k. PROPER IDENTIFICATION OF EMPLOYEES	S
e. ADEQUACY OF INSPECTIONS PERFORMED BY CONTRACTOR	S	l. ADEQUACY OF PERSONNEL	S
f. ADHERENCE TO WORK OR DELIVERY SCHEDULES	S	m. COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS (Specify)	S
g. ADEQUACY OF FACILITIES, EQUIPMENT AND TOOLS	S		

10. DESCRIPTION OF UNSATISFACTORY PERFORMANCE

11. CORRECTIVE ACTION INITIATED (Describe also degree of compliance by contractor)

12. RECOMMENDATIONS

13. GENERAL PERFORMANCE RATING (Check applicable box)
[XXX] SATISFACTORY [ ] UNSATISFACTORY

14. RATING (Check applicable box)
[ ] INTERIM [ ] FINAL

15. SERVICES UNDER THIS CONTRACT HAVE BEEN RENDERED AS DESCRIBED ABOVE.

16. REVIEWED

SIGNATURE OF RATING OFFICER

SIGNATURE OF CONTRACTING OFFICER'S REPRESENTATIVE

TYPED NAME, GRADE AND ORGANIZATION
RICHARD P. TAKISHITA, CPT
Kunieda USARC

TYPED NAME, GRADE AND ORGANIZATION
STEVE TROUT, GS9
DPW, HCSD, PTA

APZV Form 42, 1 Dec 83 Previous editions may be used until exhausted.

SERVICE CONTRACTOR'S PERFORMANCE RATING
(Annex A to Contracting Office SOP 1-82, 15 Sep 82)

DATE: 28 Feb 94

(If necessary attach extra sheets identifying each item by number)

TO: (Include ZIP Code)
DOC, USASCH
Fort Shafter, HI 96858

FROM: (Include ZIP Code)
DFE, HCSD, PTA
Fort Shafter, HI 96858-5000

1. CONTRACT NO.: DAHC77-94-P-0056

2. TYPE OF SERVICES: Exhaust Sys Cleaning

3. DATE OF CONTRACT: 10/01/93

4. CONTRACT VALUE: $1860.00

5. NAME AND ADDRESS OF CONTRACTOR
E&J Janitorial Service & Supplies
195 Kilauea Avenue
Hilo, Hawaii 96720

6. DELIVERY REQUIREMENTS
Cleaning of Exhaust System
Hilo, U.S. Army Reserve Center

7. RATING PERIOD: FROM 1 Feb 94 TO 28 Feb 94

8. PERCENTAGE OF COMPLETION: %

9. PERFORMANCE RATINGS (Indicate whether "Satisfactory" or "Unsatisfactory")

FUNCTION	RATING	FUNCTION	RATING
a. COMPLIANCE WITH CONTRACT OPERATING PROCEDURES	S	h. ADEQUACY OF SAFETY MEASURES, INCLUDING FIRE AND ACCIDENT PREVENTION	S
b. ADHERENCE TO SPECIFICATIONS, PLANS, DRAWINGS, AND OTHER TECHNICAL REQUIREMENTS	U	i. CONFORMANCE TO SECURITY REQUIREMENTS	S
c. RESULTS OF GOVERNMENT INSPECTIONS AND TESTS	S	j. SUPERVISION EXERCISED OVER PERSONNEL	S
d. QUALITY AND CONDUCT OF WORK	U	k. PROPER IDENTIFICATION OF EMPLOYEES	S
e. ADEQUACY OF INSPECTIONS PERFORMED BY CONTRACTOR	S	l. ADEQUACY OF PERSONNEL	S
f. ADHERENCE TO WORK OR DELIVERY SCHEDULES	S	m. COMPLIANCE WITH OTHER CONTRACT REQUIREMENTS (Specify)	
g. ADEQUACY OF FACILITIES, EQUIPMENT AND TOOLS	S		S

10. DESCRIPTION OF UNSATISFACTORY PERFORMANCE
Reference "Clean Up". A satisfactory amount of grease residue was not adequately removed from the overhead filters above the ovens.

11. CORRECTIVE ACTION INITIATED (Describe also degree of compliance by contractor)
Small residue was discovered upon joint inspection. Contractor was advised and he cleaned it out immediately. During a later inspection with the contracting officer, a greater build up was discovered.

12. RECOMMENDATIONS
The contractor should clean the filters with a stronger cleaner or clean the filters more extensively.

13. GENERAL PERFORMANCE RATING (Check applicable box)
☐ SATISFACTORY ☒ UNSATISFACTORY

14. RATING (Check applicable box)
☐ INTERIM ☐ FINAL

15. SERVICES UNDER THIS CONTRACT HAVE BEEN RENDERED AS DESCRIBED ABOVE.

16. REVIEWED

SIGNATURE OF RATING OFFICER

SIGNATURE OF CONTRACTING OFFICER'S REPRESENTATIVE

TYPED NAME, GRADE AND ORGANIZATION
RICHARD P. TAKISHITA, CPT
Kunieda USARC

TYPED NAME, GRADE AND ORGANIZATION
STEVE TROUT, GS9
DPW, HCSD, PTA

APZV Form 42, 1 Dec 83 Previous editions may be used until exhausted.

SECTION 6. D.- FACILITY ENGINEERING WORK REQUEST (DA FORMS 4283)

FACILITIES ENGINEERING WORK REQUEST – XFA, XFB, XFC

For use of this form, see AR 420–17 and DA Pam 420–6; the proponent agency is the Office of the Chief of Engineers.

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	DATE: YR	MO	DA	OTHER FUND CITATION	SHORT JOB DESCRIPTION	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFA		MB		4				94	03	08		WASH RACK DRAIN			

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFB	C	1																		

DESCRIPTION AND JUSTIFICATION OF WORK TO BE ACCOMPLISHED

ADMIN BLD. & MOTOR POOL DRAIN ON WASH RACK SHOULD BE PLUGGED AND FILLED.

NO LONGER USED OR FUNCTIONAL.

DESCRIBE WHAT WILL HAPPEN IF WORK IS NOT ACCOMPLISHED

THE ACCUMULATION OF OIL ON STANDING WATER IN THIS DRAIN

COULD SPILL INTO DRAINAGE AND CONTAMINATE SOIL OR INFILTRATE

THE STORM DRAIN, CAUSING A CLEAN WATER ACT VIOLATION.

REQUESTER INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.	SIGNATURE
LTC JIMMY T, FOX	IX CORPS	(808) 438-1512	

PERSON TO CALL FOR ADDITIONAL INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.

FORWARD FOR APPROVAL

TO	RECOMMENDED ACTION	ENVIRONMENTAL IMPACT (NO / YES)	ESTIMATED COST	WORK TO BE PERFORMED	FROM
APPROVING AUTHORITY	☐ APPROVAL ☐ DISAPPROVAL	☐ ☐ ENVIRONMENTAL CONSIDERATIONS ☐ ☐ EIS/EIA INITIATED ☐ ☐ EIS/EIA COMPLETED	FUNDED $ WC K $ WC L $ WC ___ $ UNFUNDED $ TOTAL $	☐ IN-HOUSE ☐ SELF-HELP ☐ CONTRACT ☐ TROOP	FACILITIES ENGINEER DATE

APPROVED FOR DESIGN		SOURCE OF FUNDS
SIGNATURE	DATE	☐ DIRECT ☐ AUTOMATIC REIMB. ☐ FUNDED REIMB.

REMARKS

APPROVAL ACTION

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	ACTION TAKEN	DATE: MO	DA		FORWARDED TO: DESIGN MO	DESIGN DA	ESTIMATOR MO	ESTIMATOR DA
XFC	C					A – APPROVED D – DISAPPROVED			SIGNATURE OF APPROVAL AUTHORITY				

DA FORM 1 AUG 78 4283 EDITION OF 1 FEB 78 WILL BE USED UNTIL EXHAUSTED.

WHITE (ORIGINAL) – PROJECT FILE COPY
PINK – FORWARD TO KEYPUNCH AFTER COMPLETION OF "APPROVAL ACTION" BLOCK
GREEN – FORWARD TO KEYPUNCH AFTER COMPLETION OF "FORWARD FOR APPROVAL" BLOCK

FACILITIES ENGINEERING WORK REQUEST – XFA, XFB, XFC

For use of this form, see AR 420–17 and DA Pam 420–6; the proponent agency is the Office of the Chief of Engineers.

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	DATE: YR	MO	DA	OTHER FUND CITATION	SHORT JOB DESCRIPTION	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFA		MB		4				94	03	08		AIR CONDITIONING UNIT			

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFB	C																	

DESCRIPTION AND JUSTIFICATION OF WORK TO BE ACCOMPLISHED

CONDENSATE DRAIN PAN REQUIRES CLEANING, REPAIR AND SEALING. UNIT REQUIRES RE-LEVELING TO ALLOW CONDENSATE TO DRAIN.

DESCRIBE WHAT WILL HAPPEN IF WORK IS NOT ACCOMPLISHED

THIS IS A HEALTH AND SAFETY ISSUE BECAUSE ALGAE AND BACTERIA ARE GROWING IN THE UNIT WHICH COULD EMIT INTO THE AIR CAUSING HEALTH RELATED PROBLEMS FOR PERSONNEL.

REQUESTER INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.	SIGNATURE
LTC JIMMY T. FOX	IX CORPS	(808) 438-1512	

PERSON TO CALL FOR ADDITIONAL INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.

FORWARD FOR APPROVAL

TO	RECOMMENDED ACTION	ENVIRONMENTAL IMPACT (NO / YES)	ESTIMATED COST	WORK TO BE PERFORMED	FROM
APPROVING AUTHORITY	☐ APPROVAL ☐ DISAPPROVAL	☐ ☐ ENVIRONMENTAL CONSIDERATIONS ☐ ☐ EIS/EIA INITIATED ☐ ☐ EIS/EIA COMPLETED	FUNDED $ ____ WC K $ ____ WC L $ ____ WC ___ $ ____ UNFUNDED $ ____ TOTAL $ ____	☐ IN-HOUSE ☐ SELF-HELP ☐ CONTRACT ☐ TROOP	FACILITIES ENGINEER DATE

APPROVED FOR DESIGN	SOURCE OF FUNDS
SIGNATURE ____ DATE ____	☐ DIRECT ☐ AUTOMATIC REIMB. ☐ FUNDED REIMB.

REMARKS

APPROVAL ACTION

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	ACTION TAKEN	DATE: MO	DA		FORWARDED TO: DESIGN MO	DESIGN DA	ESTIMATOR MO	ESTIMATOR DA
XFC	C					A – APPROVED D – DISAPPROVED			SIGNATURE OF APPROVAL AUTHORITY				

DA FORM 1 AUG 78 4283 EDITION OF 1 FEB 78 WILL BE USED UNTIL EXHAUSTED.

WHITE (ORIGINAL) – PROJECT FILE COPY
PINK – FORWARD TO KEYPUNCH AFTER COMPLETION OF "APPROVAL ACTION" BLOCK
GREEN – FORWARD TO KEYPUNCH AFTER COMPLETION OF "FORWARD FOR APPROVAL" BLOCK

FACILITIES ENGINEERING WORK REQUEST – XFA, XFB, XFC

For use of this form, see AR 420-17 and DA Pam 420-6; the proponent agency is the Office of the Chief of Engineers.

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	DATE: YR	MO	DA	OTHER FUND CITATION	SHORT JOB DESCRIPTION	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFA		MC						9	4	0 3	1 0	ALL A/C UNITS CLEAN & FILTER			

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFB	C																	

DESCRIPTION AND JUSTIFICATION OF WORK TO BE ACCOMPLISHED

ALL A/C UNITS REQUIRE IMMEDIATE COIL & FILTER CLEANING AND/OR REPLACEMENT IAW A/C UNIT SPECIFICATIONS.

DESCRIBE WHAT WILL HAPPEN IF WORK IS NOT ACCOMPLISHED

THE ACCUMILATION OF DUST AND DEBRIS HAS SUBSTANTIALLY REDUCED THE a/c UNITS AIR FLOW AND REFRIGERATION PERFORMANCE FAILURE TO PROVIDE IMMEDIATE AS WELL AS REGULARLY MAINTENANCE WILL LEAD TO SHORTEN A/C UNIT LIFESPAN AND INCUR REPLACEMENT COST IN THE TENS OF THOUSANDS OF DOLLARS.

REQUESTER INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.	SIGNATURE
LTC JIMME T. FOX	IX CORPS	(808) 438-1512	

PERSON TO CALL FOR ADDITIONAL INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.

FORWARD FOR APPROVAL

TO	RECOMMENDED ACTION	ENVIRONMENTAL IMPACT (NO / YES)	ESTIMATED COST	WORK TO BE PERFORMED	FROM
APPROVING AUTHORITY	☐ APPROVAL ☐ DISAPPROVAL	☐ ☐ ENVIRONMENTAL CONSIDERATIONS ☐ ☐ EIS/EIA INITIATED ☐ ☐ EIS/EIA COMPLETED	FUNDED $ ____ WC K $ ____ WC L $ ____ WC ___ $ ____ UNFUNDED $ ____ TOTAL $ ____	☐ IN-HOUSE ☐ SELF-HELP ☐ CONTRACT ☐ TROOP	FACILITIES ENGINEER DATE

APPROVED FOR DESIGN		SOURCE OF FUNDS
SIGNATURE	DATE	☐ DIRECT ☐ AUTOMATIC REIMB ☐ FUNDED REIMB.

REMARKS

APPROVAL ACTION

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	ACTION TAKEN	DATE: MO	DA		FORWARDED TO: DESIGN MO	DESIGN DA	ESTIMATOR MO	ESTIMATOR DA
XFC	C					A – APPROVED D – DISAPPROVED			SIGNATURE OF APPROVAL AUTHORITY				

DA FORM 1 AUG 78 4283 EDITION OF 1 FEB 78 WILL BE USED UNTIL EXHAUSTED

WHITE (ORIGINAL) – PROJECT FILE COPY
PINK – FORWARD TO KEYPUNCH AFTER COMPLETION OF "APPROVAL ACTION" BLOCK
BLUE – SUSPENSE FILE
GREEN – FORWARD TO KEYPUNCH AFTER COMPLETION OF "FORWARD FOR APPROVAL" BLOCK
YELLOW – REQUESTOR'S COPY

FACILITIES ENGINEERING WORK REQUEST – XFA, XFB, XFC

For use of this form, see AR 420-17 and DA Pam 420-6; the proponent agency is the Office of the Chief of Engineers.

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	DATE: YR	MO	DA	OTHER FUND CITATION	SHORT JOB DESCRIPTION	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFA		MB		4				94	03	08		INSTALL OIL WATER SEPERATOR			

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BUILDING/FACILITY: NUMBER	SUFFIX	BLANK
XFB	C																			

DESCRIPTION AND JUSTIFICATION OF WORK TO BE ACCOMPLISHED

INSTALL A OIL & WATER SEPERATOR IN THE OMS AREA FOR OIL RUN OFF RELATED TO THE WASH RACK AND MAINTENANCE FUNCTIONS.

DESCRIBE WHAT WILL HAPPEN IF WORK IS NOT ACCOMPLISHED

THE CONTINUED POSSIBILITY OF DISCHARGING POLLUTANTS INTO THE STORM DRAIN WOULD CAUSE THE CENTER TO BE IN VIOLATION OF THE CLEAN WATER ACT.

REQUESTER INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.	SIGNATURE
LTC JIMMY T. FOX	IX CORPS	(808) 438-1512	

PERSON TO CALL FOR ADDITIONAL INFORMATION

NAME	ORGANIZATION	TELEPHONE NO.

FORWARD FOR APPROVAL

TO	RECOMMENDED ACTION	ENVIRONMENTAL IMPACT (NO / YES)	ESTIMATED COST	WORK TO BE PERFORMED	FROM
APPROVING AUTHORITY	☐ APPROVAL ☐ DISAPPROVAL	☐ ☐ ENVIRONMENTAL CONSIDERATIONS ☐ ☐ EIS/EIA INITIATED ☐ ☐ EIS/EIA COMPLETED	FUNDED $ ____ WC K $ ____ WC L $ ____ WC ___ $ ____ UNFUNDED $ ____ TOTAL $ ____	☐ IN-HOUSE ☐ SELF-HELP ☐ CONTRACT ☐ TROOP	FACILITIES ENGINEER DATE

APPROVED FOR DESIGN		SOURCE OF FUNDS
SIGNATURE	DATE	☐ DIRECT ☐ AUTOMATIC REIMB. ☐ FUNDED REIMB.

REMARKS

APPROVAL ACTION

TRANS CODE	CHANGE	DOCUMENT NUMBER: REQ ID	SERIAL NUMBER	FY	TYPE	ACTION TAKEN	DATE: MO	DA		FORWARDED TO: DESIGN MO	DESIGN DA	ESTIMATOR MO	ESTIMATOR DA
XFC	C					A – APPROVED D – DISAPPROVED			SIGNATURE OF APPROVAL AUTHORITY				

DA FORM 1 AUG 78 4283 EDITION OF 1 FEB 78 WILL BE USED UNTIL [illegible] 50

WHITE (ORIGINAL) – PROJECT FILE COPY
PINK – FORWARD TO KEYPUNCH AFTER COMPLETION OF "APPROVAL ACTION" BLOCK
GREEN – FORWARD TO KEYPUNCH AFTER COMPLETION OF "FORWARD FOR APPROVAL" BLOCK

416th ENGINEER COMMAND

USAR FACILITY

TOTAL FACILITY ASSESSMENT

INSTALLATION NAME: SFC MINORU KUNIEDA USARC

INSTALLATION NUMBER: HI-2104PHH08 DATE: 20 March, 1996

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B.	LOCATION MAP
C.	SITE MAP
D.	BUILDING FLOOR PLAN
5.	EXISTING CONDITIONS PHOTOGRAPHS
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B.	INTERIOR PHOTOGRAPHS
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A.	MAINTENANCE AND REPAIR REQUIREMENTS
B.	MINOR CONSTRUCTION/ALTERATION REQUIREMENTS
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2. LONG RANGE (5 YEAR) MAINTENANCE PLAN
3. FIRE PREVENTION DATA - **NOT ASSESSED**
4. ENERGY AUDIT
5. SAFETY CHECKLIST ASSESSMENT
6. ENVIRONMENTAL COMPLIANCE ASSESSMENT
7. ARMS STORAGE STRUCTURAL CERTIFICATION

SECTION 1 - EXECUTIVE SUMMARY
FOR THE TOTAL FACILITY ASSESSMENT OF

INSTALLATION NAME: SFC MINORU KUNIEDA USAR CENTER (HILO)

INSTALLATION NUMBER: 15900

FFID: HI-2104PHH08

The SFC Minoru Kunieda USAR Center was assessed on 18-20 March 1996 by the ESG-West, 416th ENCOM, Facility Evaluation Team (FET). The center consists of five buildings including: 1) a unit administration building; 2) a Unit Assembly Hall; 3) a OMS facility with a unit vehicle maintenance shop; 4) a Vehicle Maintenance shed; and an Equipment shed. A new vehicle washrack was currently under construction and the project will be completed in FY 96.

The center's seven foot chain link fence helps protect the facility from vandalism. The neighborhood surrounding the center is commercial, with the University of Hawaii on the east, on the north by the YMCA, and on the south by a pre-school.

Due to the heavy rainfall the facility roofs require periodic attention to eliminate leaks. Building exteriors for the administration building and the OMS building require immediate attention due to the exterior paint failure and the rust caused by the rain. The Assembly Hall roof is leaking and repeated attempts to repair the leaks have failed. The south side assembly hall double exit doors have rusted through that it poses a safety hazard to use them in an emergency. The windows in the double doors as cracked. Both the doors and the glass windows should be replaced. The FET developed several work orders to repair those items in the Assembly Hall.

The center generated five RPMA projects with work orders to repair and replace forementioned roof, doors, windows, drainage repair, and painting of the two buildings. The Long Range Maintenance Plan identified $238,200 worth of repairs for the next five fiscal years.

The FET conducted an energy survey, environmental compliance assessment systems (ECAS) review, and safety assessment. The ECAS review followed up on the 1994 ECAS conducted by FET team on the current units. In general, the facility had completed their

corrective actions that had been identified in the 1994 ECAS report. New construction of a vehicle washrack was under way at the time this TFA was conducted. An electrical services connection had been installed by the contractor that did not meet the National Electric Code identified by the safety inspection conducted. The Facility Manager informed the Corps of Engineer Inspector on site of this safety deficiency. A follow-on meeting with the contractor and the inspector was held with the 416th ENCOM FET and the problem quickly resolved by the contractor replacing the hazardous condition with a safe electrical service for the construction site.

The FET reviewed the vehicle washrack project during the TFA and recommended that the storm discharge effluent currently being discharged off-site by the creek in the west of the facility be considered for collection of the run off by the oil-water separator being installed as part of the construction project. The cost of connecting the storm drain system which now discharges approximately 50 feet from where the washrack is being constructed would be minor. The modification will allow to tie in several of the work orders now in the system to tie the storm drain and extend the pipe. It will enable the facility to capture any petroleum contaminant before it leaves the site, and will reduce the 9TH ARCOM liability considerably under the NPDES Storm Water Permit.

Joseph Moscariello

JOSEPH MOSCARIELLO
LTC, EN, USAR
TEAM LEADER

SECTION 2-USAR FACILITY ASSESSMENT IDENTIFICATION

INSTALLATION NAME: KUNIEDA USARC

STREET ADDRESS: 470 W. Lanikaula Street

CITY: Hilo STATE: HI ZIP CODE:96720

FACILITY IDENTIFICATION NUMBER: 15900

FFID: HI-2104PHH08

RSC/RSG: 9TH ARCOM

TYPE FACILITY:
A. USARC: X B. AFRC:___ C. OMS: X D. AMSA:___
E. DS/GS:___ F. MED:___ G. WET:___ H. FLIGHT:___
I. ECS:___ J. CTF:___ K. OTHER:_____

ASSESSMENT PERFORMED BY:
FACILITY ENGINEERING TEAM INCLUDED:

LTC Joseph Moscariello SFC Charles Kimzey
MAJ William Harrison
SGM Robert Fisher

REFER TO FOR INFORMATION: LTC Joseph Moscariello
12454 Oak Mist Lane
Auburn, CA 95603
H (916) 889-1129
W (916) 557-6625

PERSONNEL CONTACTED ON SITE:

NAME/GRADE	DUTY POSITION	PHONE NUMBER
CPT Richard Takeshita	Facility Manager	(808)935-4257
SFC Paul Hacker	Administration NCO	(808)935-9288
Mr. Eugene Silva	AMSA Shop	

ASSESSMENT CONDUCTED FROM: 18 March 96/0800 TO 20 March 96/1400
(DATE/TIME) (DATE/TIME)

DATE OF LAST ASSESSMENT: 7-8 March 1994

SECTION 3 - USAR FACILITY IDENTIFICATION DATA

EMAAR data sheets have not been forwarded to this unit.

Request that the RSC Engineer forward EMAAR data base sheets for the SFC Minoru Kunieda USARC Facilities. Revisions will be annotated on the EMAAR data sheets and sent back as well as filed here with the 416th ENCOM, ESG-W.

SECTION 4

GRAPHICAL DATA

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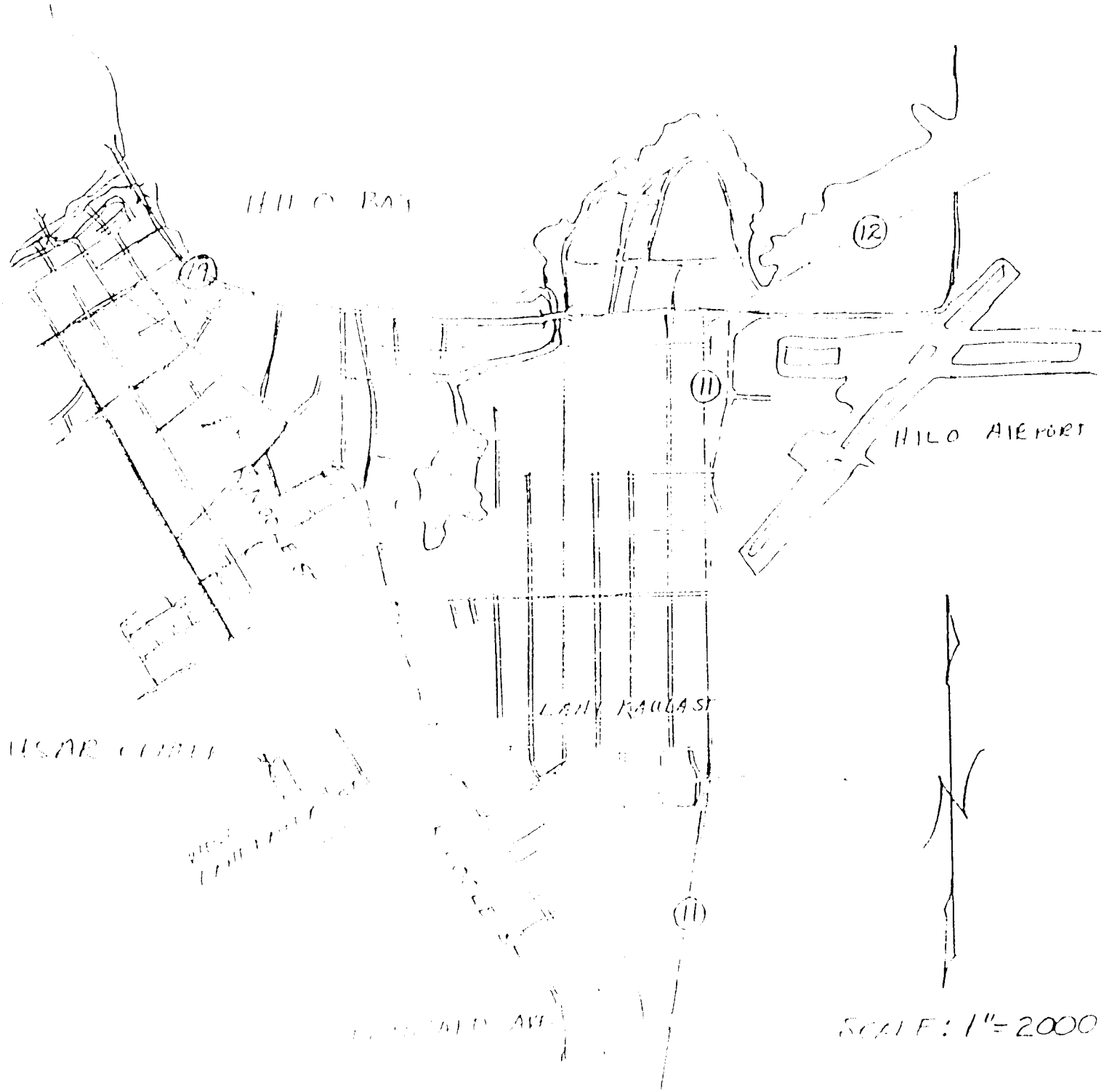
SECTION 4A - VICINITY MAP

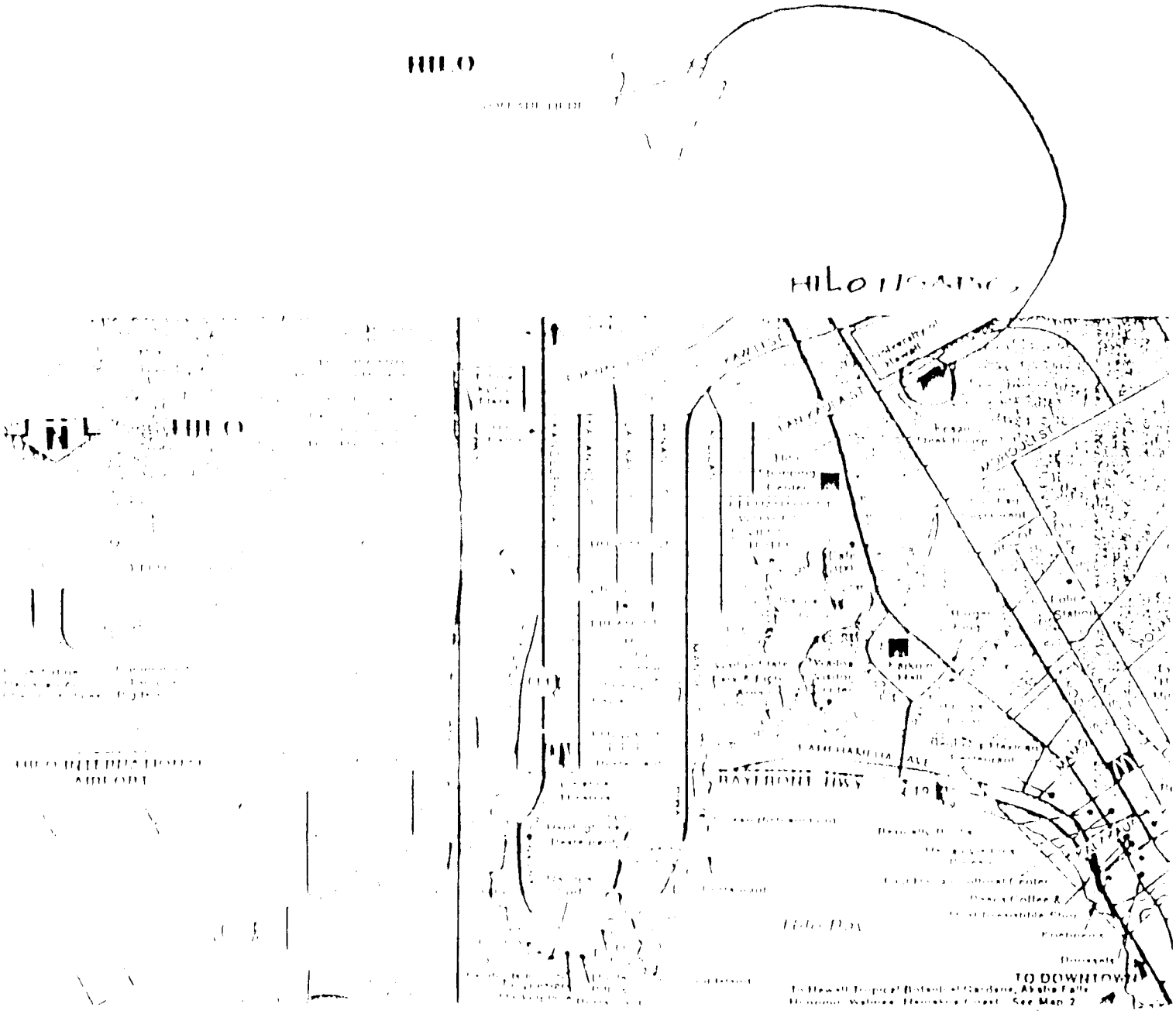


OPERATIONS MAP, 310 KUNIDA USARC

HILO, HAWAII

SECTION 4B - LOCATION MAP

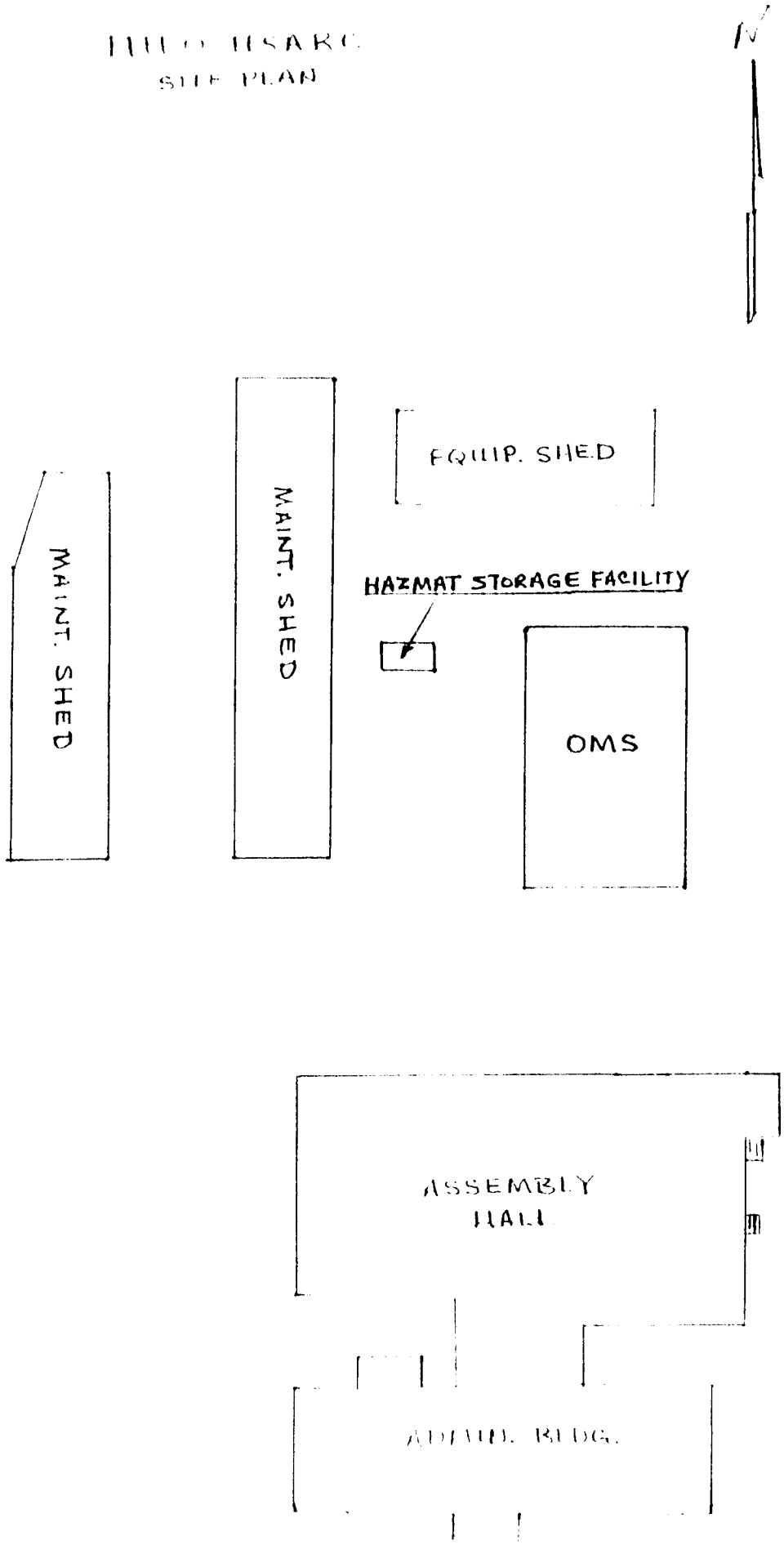
KUNIEDA USARC
VICINITY PLAN



SECTION 4C - SITE MAP

HILO USARC

SITE PLAN

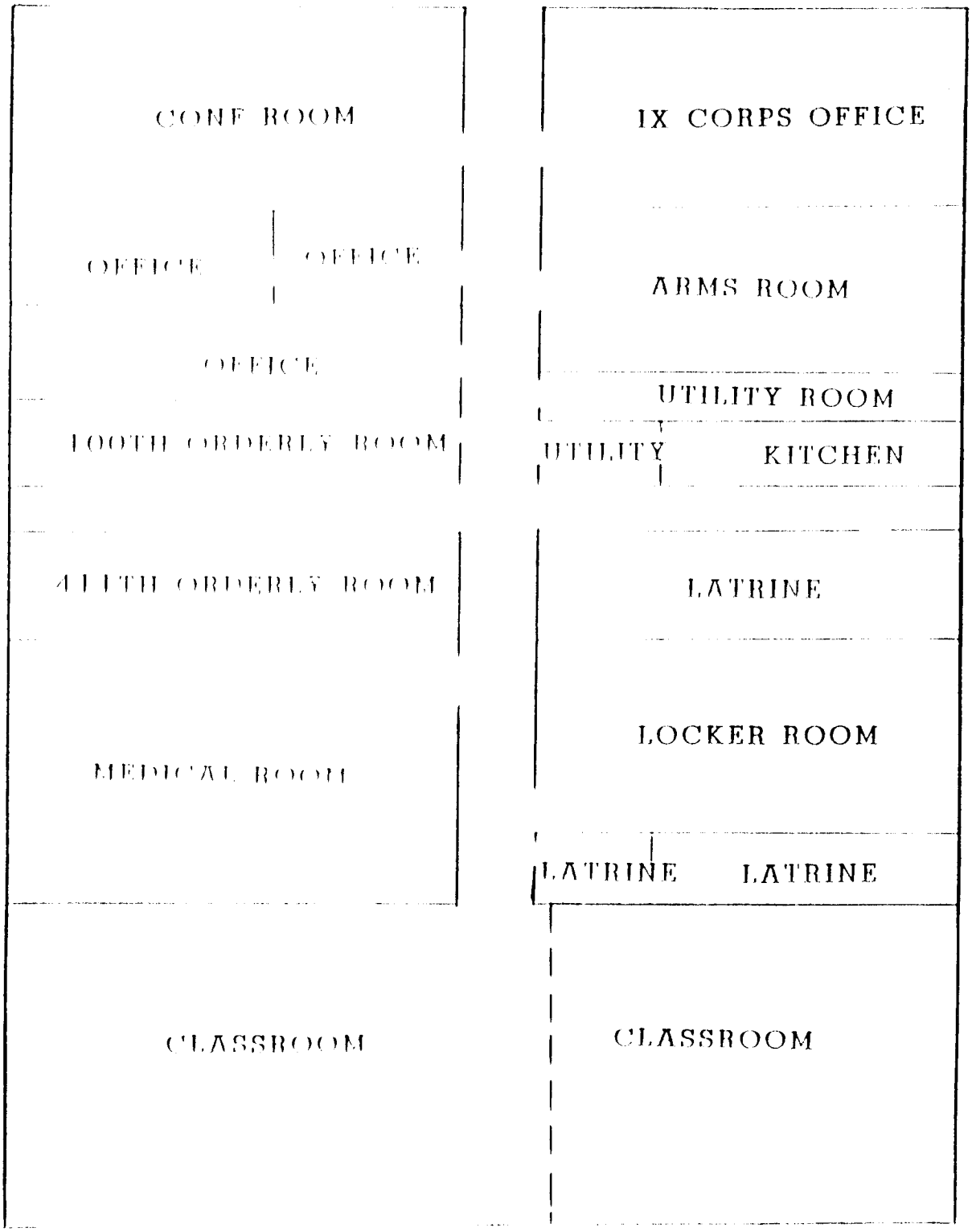


SECTION 4D - FLOOR PLAN

USARC

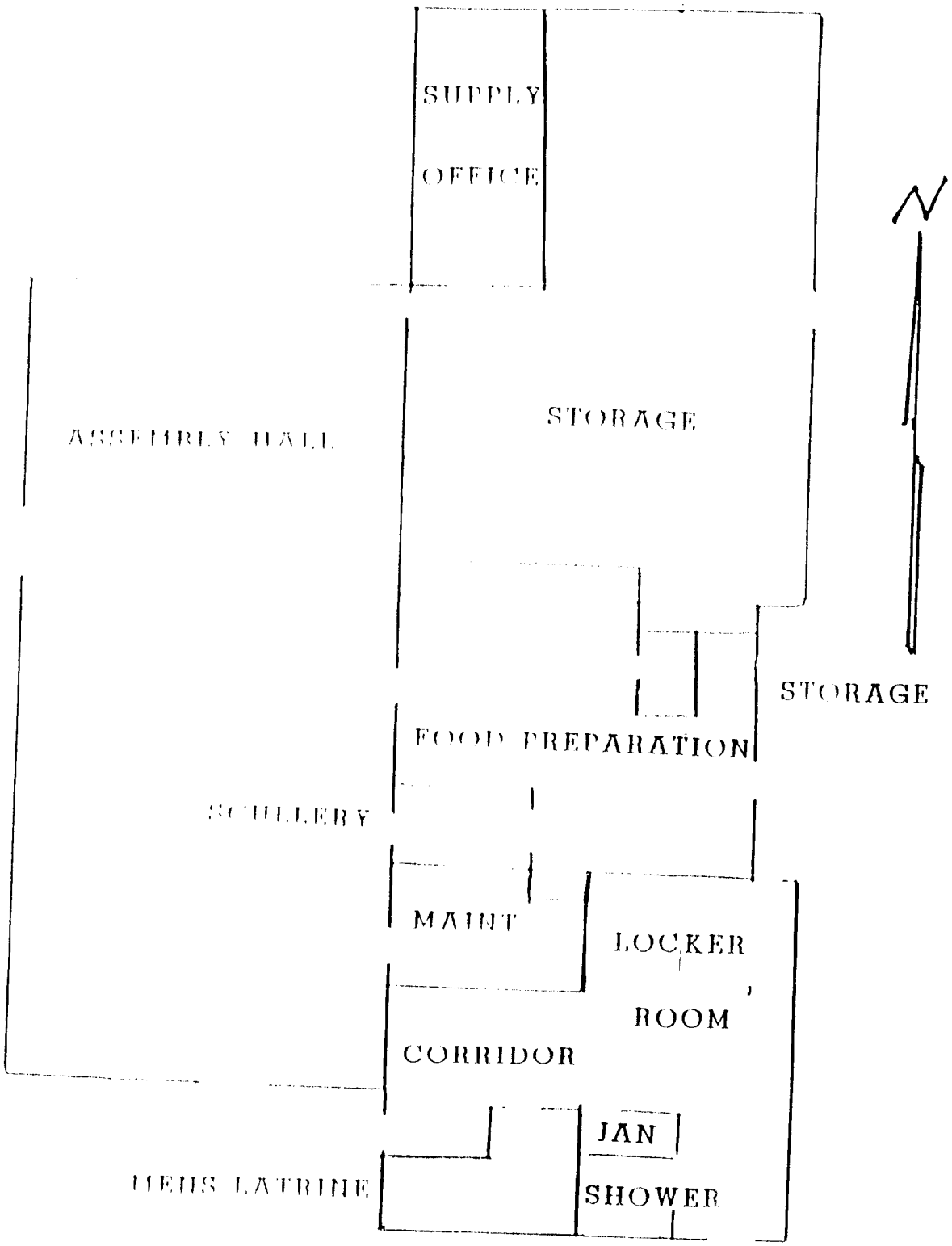
NORTH

ADMINISTATION FLOOR PLAN



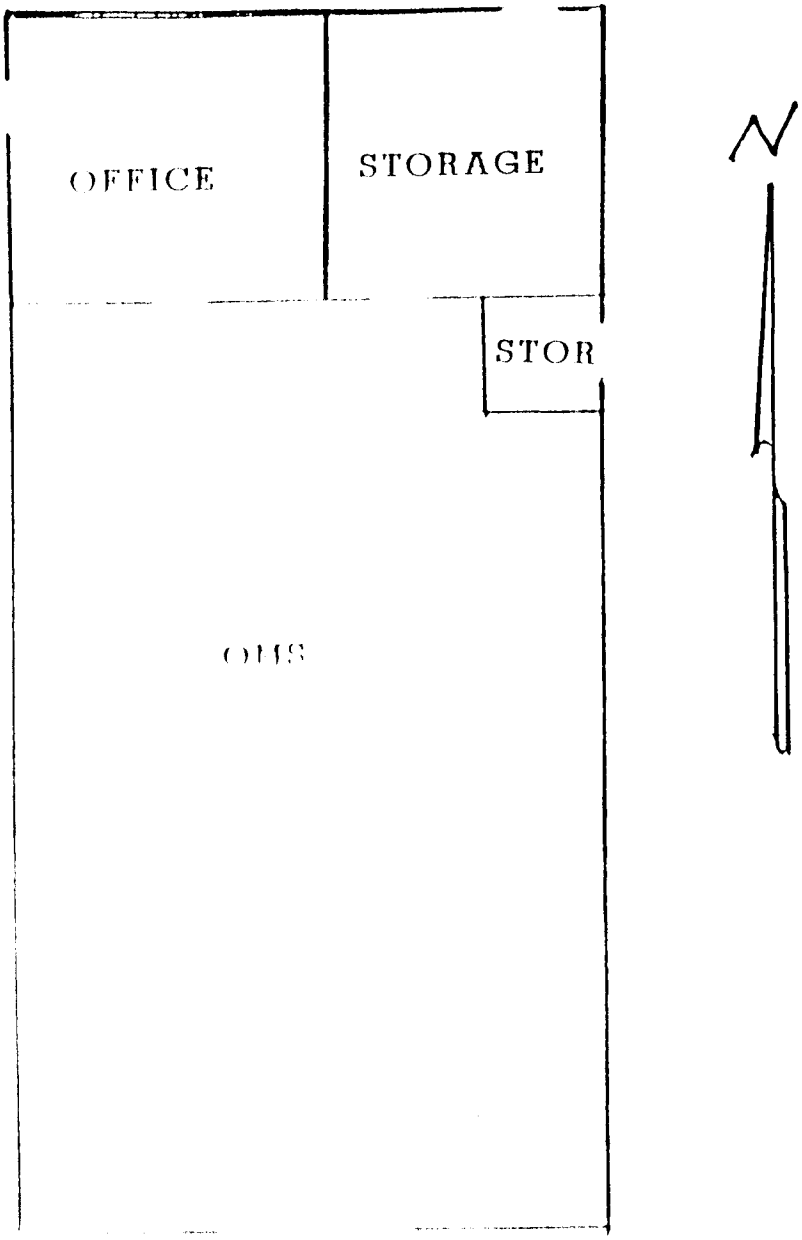
HILO USARC

ASSEMBLY BUILDING



HILO USARC

MOTOR POOL PLAN



SECTION 5

EXISTING CONDITIONS PHOTOGRAPHS

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SECTION 5A

EXTERIOR PHOTOGRAPHS

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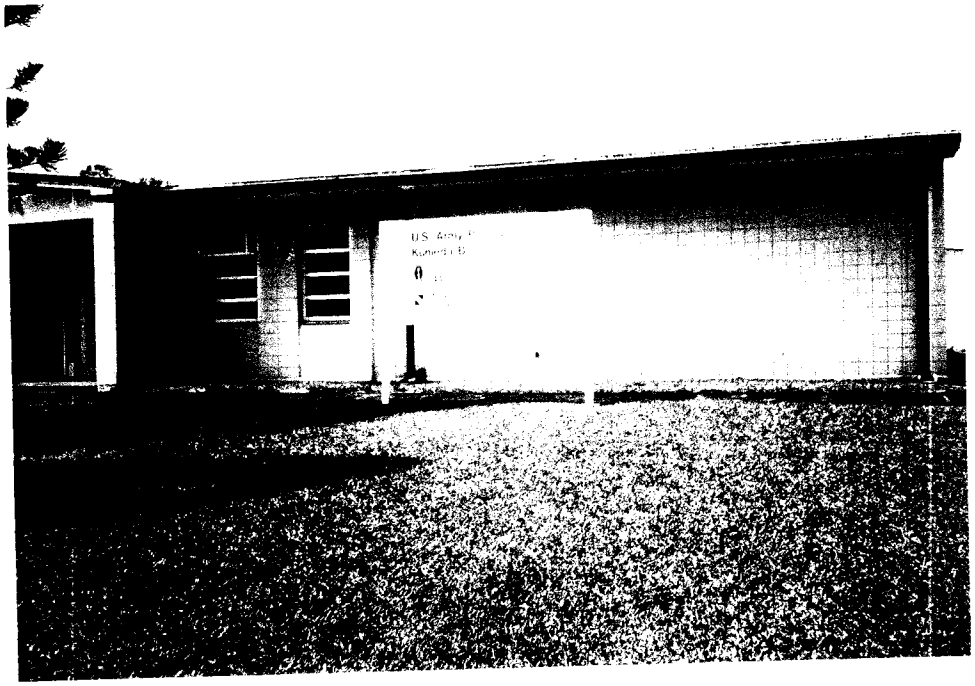
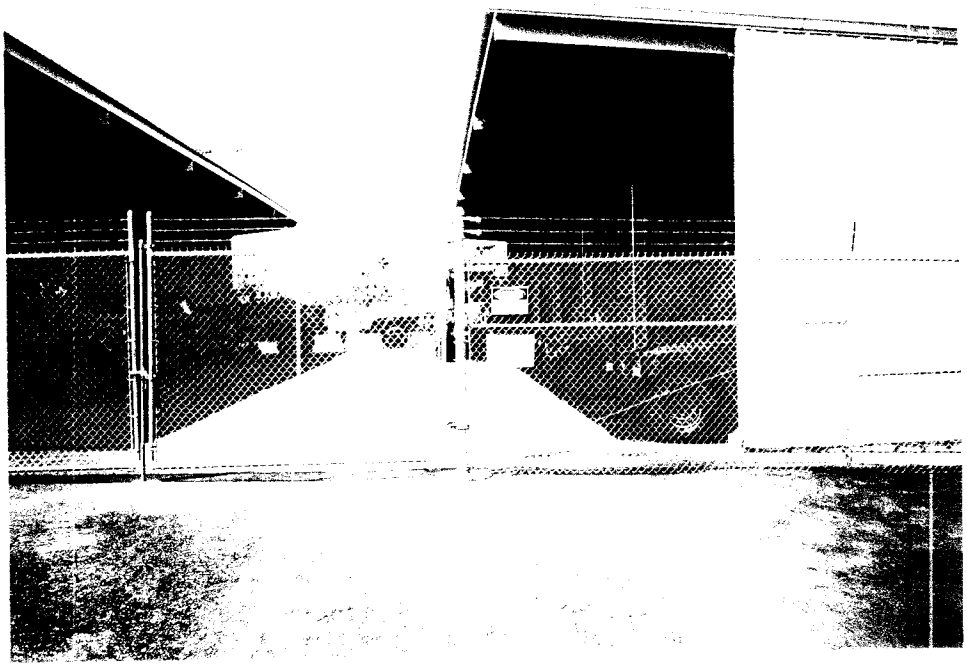


USARC - Front ENTRANCE

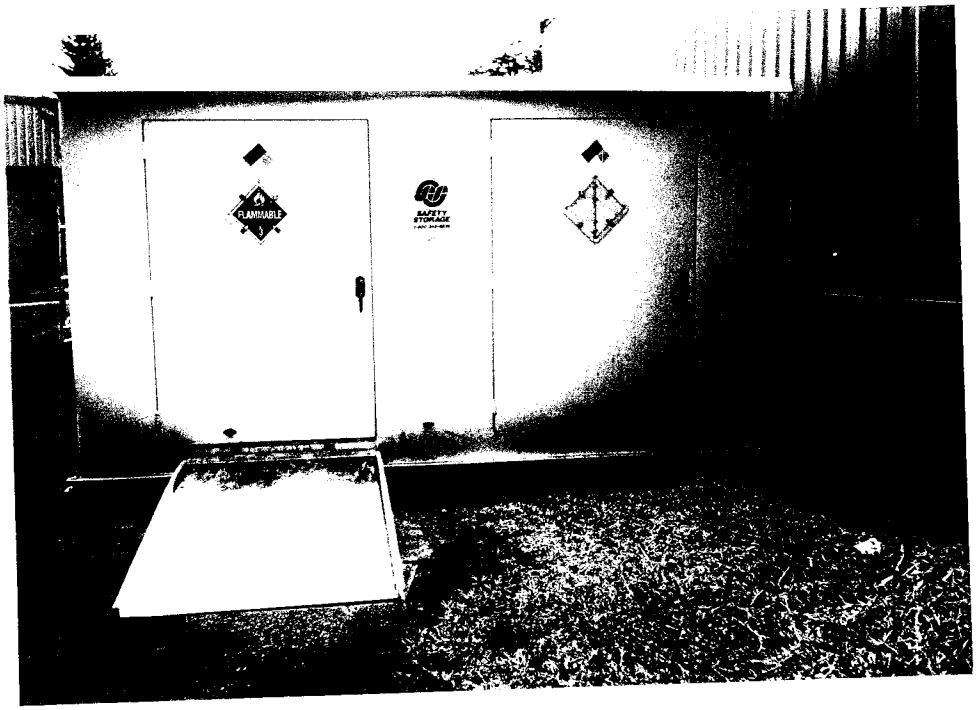
USARC - Arrial View

Used Oil Storage

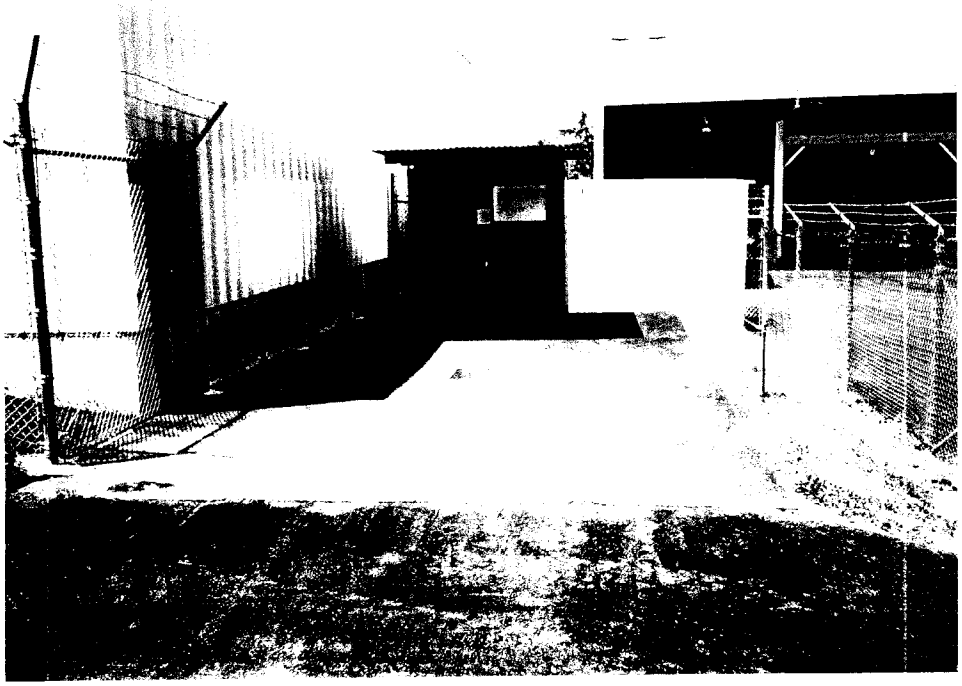
Used Oil Storage



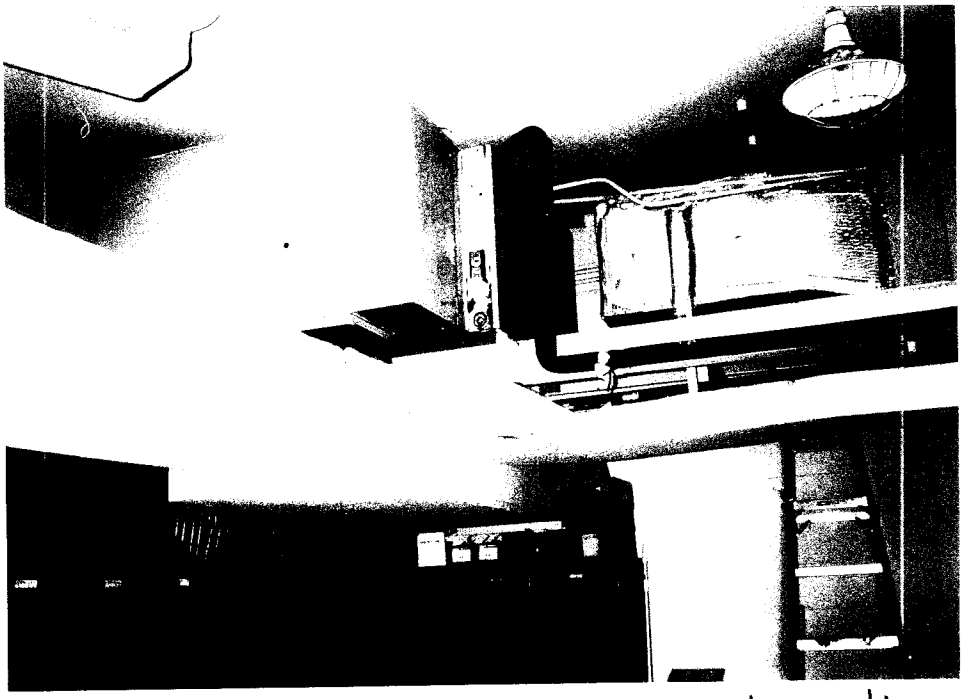
Equipment Storage Sheds



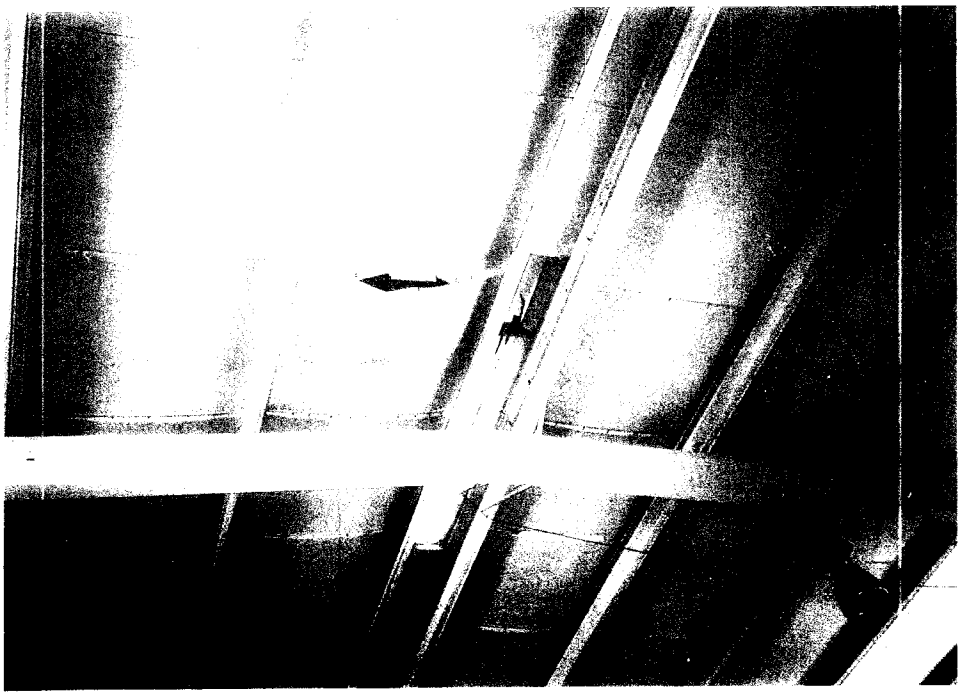
HAZMAT STORAGE



Existing Washrack



Leaking HVAC System - Condensation



Water Damage - Drill Hall Ceiling

Water Damage - Drill Hall Ceiling

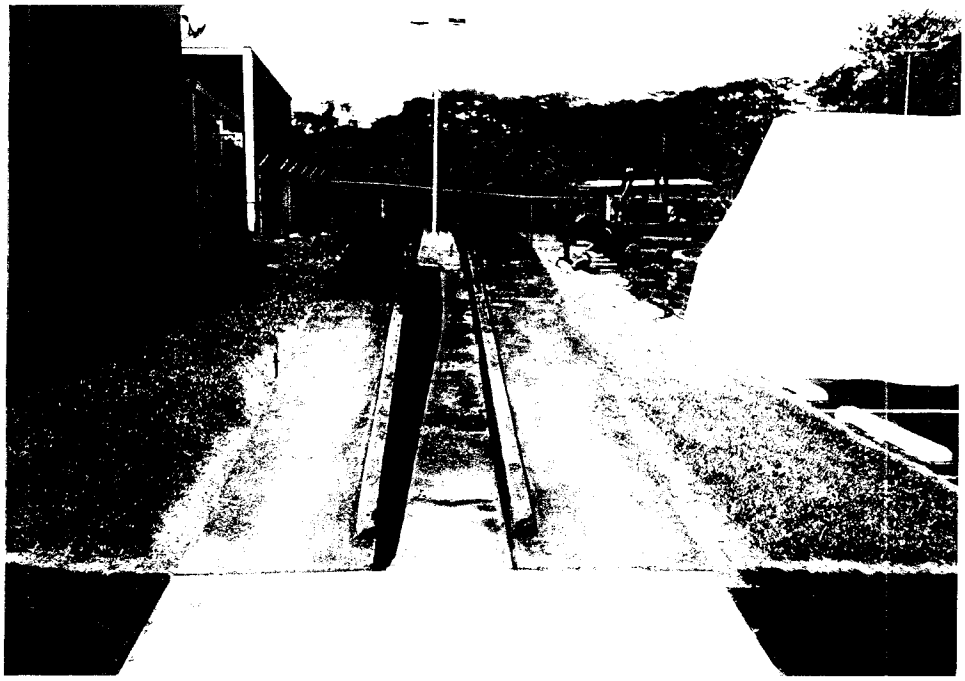
Peeling Paint - Drill Hall

Rusted Doors - Drill Hall

Rusted Electric Box
OMS Bldg.

Rusted Doors - Drill Hall

Drainage Ditch



Grease Rack

SECTION 6 - UNCONSTRAINED SUMMARY OF WORK REQUIREMENTS

INSTALLATION NAME: SFC MINORU KUNIEDA USARC

INSTALLATION NUMBER: 15900

FFID:HI-2104PHH08

		ESTIMATED COST ($000)
A.	PREVIOUSLY IDENTIFIED MAINTENANCE AND REPAIR	:111.5
	NEWLY IDENTIFIED MAINTENANCE AND REPAIR	:
B.	PREVIOUSLY IDENTIFIED MINOR CONSTRUCTION/ ALTERATION	:104.0
C.	PREVIOUSLY IDENTIFIED OTHER ENGINEERING SERVICES	: 22.7
	NEWLY IDENTIFIED OTHER ENGINEERING SERVICES	:
TOTAL UNCONSTRAINED RPMA REQUIREMENTS		:238.2

SECTION 6A - SFC Minoru Kunieda USARC Maintenance & Repair Work Requirements

WORK ORDER NUMBER	BUILDING NUMBER	WORK DESCRIPTION	UM	ESTIMATED COST ($000)
MB401315P	006	Install Air Conditioner	LS	50.0
MB401325P	001	Arms Room Interior Door	LS	2.0
MB401335P	003	Replace Ridge Ventilator	LS	4.5
MB401405P	006	Repair Leaking Roof	LS	25.0
MB401536P	001	Replace Existing IDS	LS	25.0
MB401152P	001	Replace Existing VAT/New Tile	LS	2.0
MB401596P	006	Replace Existing Mercury Vapor Lights with Low Pressure Sodium	LS	1.5
MB401686P	003	Replace Window Push Bar Assem	LS	1.5

SECTION 6B - SFC Minoru Kunieda USARC Minor Construction & Alterations Work Requirements

WORK ORDER NUMBER	BUILDING NUMBER	WORK DESCRIPTION	UM	ESTIMATED COST ($000)
MB401345P	006	Pave Motor Equipment Area	LS	25.0 k
MB401355P	005	Paint/Seal Exterior Walls	LS	29.0 k
MB401375P	005	Add Emergency Lights	LS	2.0 K
MB401395P	006	Add Lenght To Culvert	LS	12.0 k
MB401415P	005	Remove Washrack	LS	7.0 k
MB401425P	005	Remove Grease Rack	LS	9.0 k
MC401566P	006	Concrete Pad/Overhead-POL Shed	LS	13.0 k
MB401606P	006	Extend 6" Storm Water Pipe	LS	2.0 k
MB401616P	003	Install AC in Supply Admin.Bld	LS	3.0 k
MB401626P	001	Install Public Announcement Sy	LS	2.0 k

SECTION 6C - SFC Minoru Kunieda USARC Previously Identified Other Engineering Services

WORK ORDER NUMBER	BUILDING NUMBER	WORK DESCRIPTION	UM	($000)
MB401456P	M	FY96 Refuse Collection	LS	3.0
MB401466P	M	FY96 Clean Hood & Ducts	LS	2.0
MB401475P	M	Storm Water Plans	LS	4.5
MB401486P	M	FY96 Custodial Service	LS	13.2

ENCLOSURE 6
ENVIRONMENTAL COMPLIANCE ASSESSMENT

INSTALLATION SCREEN

*FFID: HI-2104HI003
tallation Name: SFC MINORU KUNIEDA USARC
allation Category: R
MACOM: USARC

MUSARC:
BASOPS ARCOM: 9TH
Support Installation: USASCH
Facility / Activity Type: 1) RM 2) MS 3) ME 4) PO 5)

EPA Region: 9
Congressional District:
Address: 470 WEST LAIKAULA STREET

City: HILO
State: HI
Country: USA
Zip Code: 96720-4038

ASSESSMENT SCREEN

*Fiscal Year: 1996 *Assessment Date (MM/DD/YYYY): 03/20/1996
*Assessment Type: E
*Manual Used: T

M al Supplement Used:

Local Manual (OCONUS: MACOM Specific Manual)
Date (MM/YYYY): /
Author:
Title:

State Manual (OCONUS: Country Specific Manual)
Date (MM/YYYY): /
Author:
State Postal Code or Country Code:

*Assessor Name: MAJ WILLIAM M. HARRISON
Point of Contact: LTC JOSEPH MOSCARIELLO

Address: 12454 OAK MIST LANE

City: AUBURN
State: CA
Zip Code: 95603-
Phone: (916)557-6625

For Contract ECAS

Contract Number:
Delivery Order Number:
racting Office:

TABLE 1-1
SUMMARY OF FINDINGS

INSTALLATION: SFC MINORU KUNIEDA USARC
I : HI-2104HI003

Fiscal Year: 1996

SECTION NO.	TITLE	REGULATORY 1	REGULATORY 2	REGULATORY HS	MANAGEMENT POS	MANAGEMENT 3	MANAGEMENT HS	TOTAL
A	Air Emissions	0	1	0	0	2	0	3
C	Cultural Resources	0	0	0	0	1	0	1
HM	Hazardous Materials	3	0	3	4	2	2	14
HW	Hazardous Waste	0	0	0	0	3	1	4
NR	Natural Resource	0	0	0	0	1	0	1
O1	Environmental Impacts	0	0	0	0	1	0	1
O2	Environmental Noise	0	0	0	0	2	0	2
O3	IRP	0	0	0	0	1	0	1
O4	Pollution Prevention	0	0	0	0	4	0	4
O5	Program Management	0	0	0	0	1	0	1
PM	Pesticide	0	0	0	0	0	0	0
PO	POL	0	3	0	1	3	1	8
SO	Solid Waste	0	0	0	0	2	0	2
ST	Storage Tanks	0	0	0	0	1	0	1
T1	PCB	0	0	0	0	0	0	0
T2	Asbestos	0	0	0	1	0	0	1
T3	Radon	0	0	0	0	0	1	1
T4	Lead Based Paint	0	0	0	0	0	0	0
WA	Wastewater	0	2	0	0	0	0	2
W	Water Quality	0	0	1	0	0	0	1
	TOTALS	3	6	4	6	24	5	48

Data File Name Prefix: C:\ECAS\HILO
Date Summary Report Produced: 03/21/96

A.4.1.R #1 II ARMY/DOD FINDING
FINDING ID: A.4.1.R
MANUAL QUESTION NUMBER: A-004-001-R
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Existing exterior painted finishes of facility are deteriorating, including paint chipping from existing surfaces. Facility manager advises proposed project to remove existing painted finishes from all structures by sandblasting, and repaint entire center. Based on lead paint sample laboratory results provided, lead content in existing paint varies from less than .005% to 7.8%. Potential for airborne lead contamination during stripping operations. Recommend Industrial Hygenist review this data so that appropriate safety measures can be implemented.

CRITERIA: Lead exposure for personnel should be within specific limits (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Accelerate contract award for refinishing project to remove immediate hazard of friable toxic materials chipping from facility. Provide lead content information to bidding painting contractors to enhance their risk assessment, and lessen liability exposure to IX ARCOM. Ensure approved refinishing plan either encapsulates lead containing paint, or safely entrains and captures removed product for proper disposal of toxic materials.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

A.1.1.R #1 III ARMY/DOD FINDING
FINDING ID: A.1.1.R
MANUAL QUESTION NUMBER: A-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have DODD 6050.9

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED: _____

2) CURRENT STATUS OF THE CA: _____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN: _____

4) ESTIMATED COMPLETION DATE FOR CA: _____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

A.1.3.R #1 III ARMY/DOD FINDING
FINDING ID: A.1.3.R
MANUAL QUESTION NUMBER: A-001-003-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Facility manager states that DCSENG directed no emissions inventory necessary.

CRITERIA: Preventive Medicine personnel at each installation are required to conduct and maintain an up-to-date emissions inventory listing of all stationary sources of air pollution and inspect stationary air pollution sources periodically to assess compliance with applicable standards (AR 40-5, para 11-4b and 200-1, para 1-25c(1)).

FINDING COMMENTS: Potential for exceedance very slight based on observed sources of airborne emissions.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): IX ARCOM DCSENG provide documentation that facility is exempt from requirement, or included in general inventory conducted for facilities in the area of operations.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

C1.1.1.R #1 III ARMY/DOD FINDING
FINDING ID: C.1.1.R
MANUAL QUESTION NUMBER: C1-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

EXISTING NOV: NO

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have PL 101-601, 16USC470ii or 25USC3001. Did not produce NEPA and NHPA.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED: _____

2) CURRENT STATUS OF THE CA: _____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN: _____

4) ESTIMATED COMPLETION DATE FOR CA: _____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.1.5 #1 I FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.1.5
MANUAL QUESTION NUMBER: HM-001-005
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All hazardous materials product containers observed were distinctly and legibly marked. Storage cabinet in medical section office not labelled as containing hazardous materials [70% Isopropyl Alcohol (Flammable/Toxic) and Oxygen (Oxidizer)]. Hazardous materials identifications placards (4 colored diamonds) not present at medical section office, battery room or paint conex. Hazardous materials identification placards at Flammable storage building not posted with hazard indications.

CRITERIA: Containers of hazardous chemicals in the workplace are required to be labeled, tagged, or marked with specific information (29 CFR 1910.1200(b)(3)(i), 1910.1200(b)(4)(i), 1910.1200(b)(5), and 1910.1200(f)(5) through 1910.1200(f)(7)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Post hazard indicators to placards at flammable storage building, materials are on hand at the facility. Obtain additional placards and indicator markings for other identified areas, and properly mount.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED: _____

2) CURRENT STATUS OF THE CA: _____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN: _____

4) ESTIMATED COMPLETION DATE FOR CA: _____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.35.1 #1 I FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.35.1
MANUAL QUESTION NUMBER: HM-035-001
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative
LOCATION: OLD WASHRACK WEST OF AMSA
IFS FACILITY NUMBER:
FACILITY TYPE:

EXISTING NOV: NO

FINDING DESCRIPTION: Aerosol spray paint containers are stored in sealed conex container. Aerosol spray containers are required to be in a ventilated storage area.

CRITERIA: Specific management practices should be considered when storing and handling flammable/combustible materials (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Recommend procurring OSHA approved paint storage lockers for all paint maintained on the facility. Ensure storage containers meet ventilation requirements for the storage of aerosol products.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.35.4 #1 I FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.35.4
MANUAL QUESTION NUMBER: HM-035-004
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative
LOCATION: MEDICAL SECTION OFFICE
IFS FACILITY NUMBER:
FACILITY TYPE:

EXISTING NOV: NO

FINDING DESCRIPTION: Wooden storage cabinet in medical section office does not meet minimum requirements for storage of flammable liquids (70% Isopropyl Alcohol).

CRITERIA: Storage cabinets used for the storage of flammable/combustible liquids must meet specific requirements (29 CFR 1910.106(d)(3)).

FINDING COMMENTS: Quantity of flammable liquids is small, containers sizes are small. Do not require large storage cabinet like those housed in the flammable storage building.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Provide OSHA approved flammable storage cabinet for storage of flammable medical section supplies.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED: _____

2) CURRENT STATUS OF THE CA: _____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN: _____

4) ESTIMATED COMPLETION DATE FOR CA: _____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.1.1.R #1 III ARMY/DOD FINDING

Hazardous Materials

FINDING ID: HM.1.1.R
MANUAL QUESTION NUMBER: HM-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088, DOD Directive 6050.8 or NFPA.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.10.1 #1 III FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.10.1
MANUAL QUESTION NUMBER: HM-010-001
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Written HAZCOMM plan/program was available. HAZCOMM training is conducted semi-annually, but no records of training attendance are maintained. No hazardous materials inventory was attached to the published HAZCOMM plan, though one was later produced from another location. Consolidated inventories of hazardous materials are not available at the individual work place, though MSDS sheets for each product or material are provided.

CRITERIA: Installations/CW facilities are required to have a written hazard communication program that is designed to provide all employees with information about the hazardous chemicals to which they are exposed (29 CFR 1910.1200(b)(6) and 1910.1200(e)(1)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Consolidate environmental compliance plans and supporting data into one binder, or consolidate into individual binders under common headings. post copy of consolidated hazardous materials inventory with MSDS sheets at each point of storage or use.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

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_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

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_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

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_____

_____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.10.2 #1 HS FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.10.2
MANUAL QUESTION NUMBER: HM-010-002
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Full time employees have received required formal training in the handling, use and potential hazards of hazardous materials. Reserve (IDT) soldiers are provided with hazards briefings, though training documentation has not been maintained. Procedures for actions to be taken in the event of a hazardous materials discharge appear to be understood, however, some conflicts apparent in understood tasks versus the written guidelines in the HAZCOMM plan and the ready reference pocket cards carried by unit soldiers. Mechanics are identified, and on appointment orders, as the Installation Response Team. Team training, as described by the facility manager, suggests that no hands on spill response training is being conducted. Potential that protective measure and procedures are not fully understood.

CRITERIA: Personnel working with hazardous materials are required to be trained in their use and the potential hazards of such materials (29 CFR 1910.1200(b)(3)(iii), 1910.1200(b)(4)(iii), 1910.1200(b)(6), and 1910.1200(h)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): In coordination with DCSENG, modify HAZCOMM document to present uniform guidance to all personnel involved. Provide additional training to IDT reserve IRT members for actions related to hazardous materials discharges. Conduct spill containment drills with IRT to provide practical training that will build soldiers confidence in their ability to properly react to a hazardous materials discharge event.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.35.9 #1 HS FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.35.9
MANUAL QUESTION NUMBER: HM-035-009
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative
LOCATION: MEDICAL SECTION OFFICE
IFS FACILITY NUMBER:
FACILITY TYPE:

EXISTING NOV: NO

FINDING DESCRIPTION: No smoking signs, hazardous materials placards, oxidizer and flammable hazard signage not posted at medical section office in vicinity of flammable liquids (70% IPA) and oxygen (Oxidizer).

CRITERIA: Areas where flammable/combustibles are stored must meet certain fire protection standards (29 CFR 1910.106 (d)(7)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Post standard hazard signage and placards at or near doorway to medical section office.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

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_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

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4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

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_____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.35.9 #2 HS FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.35.9.2
MANUAL QUESTION NUMBER: HM-035-009
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Flammable liquids (70% Isopropyl Alcohol) stored in same container with medical oxygen (Oxidizer).

CRITERIA: Areas where flammable/combustibles are stored must meet certain fire protection standards (29 CFR 1910.106 (d)(7)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Provide OSHA approved storage cabinets to segregate incompatibles. One certified for flammables, and one certified for oxidizers.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.40.2 #1 HS FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.40.2
MANUAL QUESTION NUMBER: HM-040-002
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION: MEDICAL SECTION OFFICE
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: No apparent provisions evident for containing, collecting and disposing of flammable and toxic liquid spill (70% Isopropyl Alcohol)

CRITERIA: Incidental storage of flammable/combustible liquids in industrial areas must conform to certain requirements (29 CFR 1910.106 (e)(2)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Provide small spill containment kit including small absorbent booms, or pads, and air tight fire resistant refuse container.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

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_____

2) CURRENT STATUS OF THE CA:_____

3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__

EXPLAIN:_____

_____

_____

4) ESTIMATED COMPLETION DATE FOR CA:_____

5) REVIEWER'S REMARKS: _____

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_____

_____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.45.1 #1 HS FEDERAL FINDING

Hazardous Materials

FINDING ID: HM.45.1
MANUAL QUESTION NUMBER: HM-045-001
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Oxygen cylinders (small) in medical section office not properly secure against fall, one in cabinet sitting upright on shelf, on top of other medical supplies. Oxygen cylinder (large) in AMSA shop not secured to structure, not secured against fall. Acetylene cylinder under utility shed north of AMSA shop not adequately secured against fall, loose chain hooked around tension rod brace.

CRITERIA: The in-plant storage, handling, and utilization of all compressed gases in cylinders, portable tanks, rail tankers, or motor vehicles must be done according to the Compressed Gas Association Pamphlet P-1-11965 (29 CFR 1910.101).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Provide separate storage cabinet/locker in medical section office to secure oxygen cylinders. Install chains, deliberately anchored to concrete or steel structures, to secure cylinders in shop and storage areas. Additionally, consider providing empty cylinder storage/anchorage locations as well.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

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2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

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4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

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_____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.1.3.R #1 POSITIVE ARMY/DOD FINDING Hazardous Materials
FINDING ID: HM.1.3.R
MANUAL QUESTION NUMBER: HM-001-003-R
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Fully complied with reporting requirements of Right-To-Know Act. Both IX ARCOM and facility manager reported specific hazardous materials and quantities to the responding fire department.

CRITERIA: The facility should coordinate with the responding fire department concerning the types of hazardous chemicals used at the facility, the areas where they are used, what they are used for, and the quantities used in a given operation (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S):

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.1.4 #1 POSITIVE FEDERAL FINDING Hazardous Materials
FINDING ID: HM.1.4
MANUAL QUESTION NUMBER: HM-001-004
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION: AMSA SHOP, BATTERY RM, FLAM STOR & PAINT STOR
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: MSDS sheets are conspicuously posted at all storage or work areas where hazardous materials are present.

CRITERIA: Installations/CW facilities are required to have on file a MSDS for each hazardous chemical stored and used at the installation/CW facility (29 CFR 1910.1200(b)(3)(ii), 1910.1200(b)(4)(ii), 1910.1200(b)(6), 1910.1200(g)(1), and 1910.1200(g)(8)).

FINDING COMMENTS: Excellent system for putting required health and safety information in the hands of the soldiers working with the products.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S):

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.1.6 #1 POSITIVE FEDERAL FINDING Hazardous Materials
FINDING ID: HM.1.6
MANUAL QUESTION NUMBER: HM-001-006
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All storage areas, especially those for hazardous materials, indicated excellent housekeeping procedures and pride of ownership.

CRITERIA: Specific housekeeping requirements must be met in areas where hazardous materials are stored (29 CFR 1910.176(c)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Some attention should be paid to the medical section office, it was the only area were product storage was not immaculate.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HM.20.1 #1 POSITIVE FEDERAL FINDING Hazardous Materials
FINDING ID: HM.20.1
MANUAL QUESTION NUMBER: HM-020-001
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Spill containment kits and absorbent are available, and easily located, at all hazardous materials storage and use areas.

CRITERIA: Absorbent materials should be available for spill and/or release cleanup in areas where hazardous materials are used or stored (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S):

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____
_____
_____
_____
2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____
_____
_____
4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____
_____
_____
_____

NAME/OFFICE/PHONE: _____ DATE: _____

HW.1.1.R #1 III ARMY/DOD FINDING Hazardous Waste
FINDING ID: HW.1.1.R
MANUAL QUESTION NUMBER: HW-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have NFPA.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account, or local purchase.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____
_____
_____
_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____
_____
_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____
_____
_____
_____

NAME/OFFICE/PHONE: _____ DATE: _____

HW.1.6.R #1 III ARMY/DOD FINDING Hazardous Waste
FINDING ID: HW.1.6.R
MANUAL QUESTION NUMBER: HW-001-006-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: No record of hazardous waste minimization reporting per AR 200-1, para 6-6c(1). IX ARCOM representative stated that HAZMIN reporting was consolidated by Navy Department of Public Works for all military facilities in the hawaiian islands.

CRITERIA: Facilities are required to report hazardous waste minimization efforts (AR 200-1 para 6-6c(1)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Request IX ARCOM provide documentation of satisfaction of this requirement by DPW.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HW.15.3 #1 III FEDERAL FINDING Hazardous Waste
FINDING ID: HW.15.3
MANUAL QUESTION NUMBER: HW-015-003
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Full time personnel have received hazardous waste training, and possess documentation (training certificates, etc.). Hazard training (briefings and training films) for IDT reserve soldiers has been conducted, but records of training not maintained.

CRITERIA: Training records must be maintained for all CESQG staff who manage hazardous waste (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Conduct refreshers training for all personnel, document training with class rosters and properly file training records. Implement procedure for training and documentation as component of in-processing new accessions.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

HW.15.2 #1 HS FEDERAL FINDING Hazardous Waste
FINDING ID: HW.15.2
MANUAL QUESTION NUMBER: HW-015-002
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Full time employees have received required formal training in the handling, use and potential hazards of hazardous wastes. Reserve (IDT) soldiers are provided with hazards briefings, though training documentation has not been maintained. Procedures for actions to be taken in the event of a hazardous waste discharge appear to be understood, however, some conflicts apparent in understood tasks versus the written guidelines in the HAZCOMM plan and the ready reference pocket cards carried by unit soldiers. Mechanics are identified, and on appointment orders, as the Installation Response Team. Team training, as described by the facility manager, suggests that no hands on spill response training is being conducted. Potential that protective measure and procedures are not fully understood.

CRITERIA: CESQG personnel who handle hazardous waste should meet certain training requirements (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): In coordination with DCSENG, modify HAZCOMM document to present uniform guidance to all personnel involved. Provide additional training to IDT reserve IRT members for actions related to hazardous waste discharges. Conduct spill containment drills with IRT to provide practical training that will build soldiers confidence in their ability to properly react to a hazardous waste discharge event.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

NR.1.1.R #1 III ARMY/DOD FINDING Natural Resource
FINDING ID: NR.1.1.R
MANUAL QUESTION NUMBER: NR-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088 or AR 215-2.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

O1.1.1.R #1 III ARMY/DOD FINDING

Environmental Impacts

FINDING ID: O1.1.1.R
MANUAL QUESTION NUMBER: O1-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

_____

_____

_____

2) CURRENT STATUS OF THE CA:_____

3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__

EXPLAIN:_____

_____

_____

4) ESTIMATED COMPLETION DATE FOR CA:_____

5) REVIEWER'S REMARKS: _____

_____

_____

_____

NAME/OFFICE/PHONE: _____ DATE: _____

02.1.3.R #1 III ARMY/DOD FINDING Environmental Noise
FINDING ID: 02.1.3.R
MANUAL QUESTION NUMBER: 02-001-003-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: No documentation was available of an Incompatible Use Zone (ICUZ) study having been conducted for the center, nor was there any documentation that the center had been exempted under a general study for the area of operations.

CRITERIA: Facilities are required to conduct an ICUZ Study as a part of the ICUZ Program to identify and control noise (AR 200-1, para 7-2c, 7-2d, and 7-5a).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Have ICUZ study conducted, preferrably including peak operating periods, or provide documentation verifying centers exemption.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

_____

_____

_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

_____

_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

_____

_____

_____

NAME/OFFICE/PHONE: _____ DATE: _____

02.1.10.R #1 III ARMY/DOD FINDING Environmental Noise
FINDING ID: 02.1.10.R
MANUAL QUESTION NUMBER: 02-001-010-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: The facility has no standing operating procedures for receipt, handling and disposition of noise complaints, except in the event of death.

CRITERIA: Facilities must institute a noise complaint procedure (AR 200-1, para 7-3).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): The facility manager, in conjunction with the DCSENG, needs to establish a procedure and SOP for handling routine complaints.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

03.1.1.R #1 III ARMY/DOD FINDING IRP
FINDING ID: 03.1.1.R
MANUAL QUESTION NUMBER: 03-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088. Did not produce CERCLA/SARA.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

04.1.1.R #1 III ARMY/DOD FINDING

Pollution Prevention

FINDING ID: 04.1.1.R
MANUAL QUESTION NUMBER: 04-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have HQDA Letter 200-94-1 or Secretary of Defense Memorandum, Pollution Prevention Strategy, 11 AUG 94.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Obtain from proponent agency.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

04.1.3.R #1 III ARMY/DOD FINDING Pollution Prevention
FINDING ID: 04.1.3.R
MANUAL QUESTION NUMBER: 04-001-003-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Pollution prevention and pollution minimization training has not been conducted. Components have been addressed during other environmental awareness and environmental training events.

CRITERIA: Facilities are required to train the personnel in pollution prevention (DOD Memorandum, Objective 1, Subobjective 1).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): The facility manager, in conjunction with the DCSENG, needs to incorporate pollution minimization training into the training program supporting the Pollution Prevention Plan.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED: _____

2) CURRENT STATUS OF THE CA: _____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN: _____

4) ESTIMATED COMPLETION DATE FOR CA: _____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

04.1.6.R #1 III ARMY/DOD FINDING Pollution Prevention
FINDING ID: 04.1.6.R
MANUAL QUESTION NUMBER: 04-001-006-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: ORDERLY ROOM, ADMINISTRATIVE AREA
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Printing and xerographic paper in use at the center does not meet the current Army goal of 20% recycled (post-consumer) fiber. Only paper currently available in Hilo for office use is 100% virgin fiber.

CRITERIA: Printing or writing paper must have a minimum recycled content (HQDA LTR 200-94-1, para 6d).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Recommend IX ARCOM, in cooperation with Fort Shafter, the Navy and Air Force, investigate availability of recycled fiber copy, printing and writing paper in the hawaiian islands. If available, perhaps bulk purchase to meet all unit requirements, and HQDA directive.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

04.5.1 #1 III FEDERAL FINDING

Pollution Prevention

FINDING ID: 04.5.1
MANUAL QUESTION NUMBER: 04-005-001
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: The facility does not have, nor are they preparing, a Pollution Prevention Plan.

CRITERIA: Installations/CW facilities are required to prepare pollution prevention plans by 31 December 1995 (EO 12856, Section 3-302(d)).

FINDING COMMENTS: IX ARCOM states currently developing a Pollution Prevention Plan, not ready to field.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Recommend the facility manager, in conjunction with DCSENG, capture as many sub-components of an overall pollution prevention plan as possible and incorporate them into one comprehensive document. (e.g. - Hazardous Waste Management Plan; Asbestos Management Plan; Spill Prevention, Control and Countermeasures Plan; etc.). This all encompassing document will form the basis from which to develop the total plan.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

O5.4.1.R #1 III ARMY/DOD FINDING Program Management
FINDING ID: O5.4.1.R
MANUAL QUESTION NUMBER: O5-004-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: IX ARCOM has not provided facility manager with copies of Radon Surveys and Historic Preservation Inventories.

CRITERIA: ARCOMS and Support Installations should share pertinent portions of environmental surveys, inventories, and management plans with their facility managers (MP.)

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): IX ARCOM provide documentation that facility is exempt from requirement, or included under general inventory conducted for facilities in the area of operations.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.20.1 #1 II FEDERAL FINDING POL
FINDING ID: PO.20.1
MANUAL QUESTION NUMBER: PO-020-001
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: TACTICAL VEHICLE PARKING STRUCTURES
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Absorbent materials are present, however, evidence of water flow through the tactical vehicle storage/parking structure shows deposits of oil and diesel fuel that flow out of the structure onto natural grade and through natural drainage channels to the waterway approximately 40 meters north of the northern (rear) perimeter fence.

CRITERIA: Appropriate containment and/or diversionary structures, and cleanup equipment to prevent discharged petroleum products from reaching navigable water course are required to be readily available at the installation/CW facility (40 CFR 112.7(c) and 112.7(d)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Incorporate storm water containment and in-line filtration into proposed wash rack, or rear motor park, construction project. Alternatively, contain storm water and route through the new wash rack oil/water separators, if they would be capable of handling the rate of storm water flow.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.20.3 #1 II FEDERAL FINDING POL
FINDING ID: PO.20.3
MANUAL QUESTION NUMBER: PO-020-003
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: TACTICAL MOTOR VEHICLE PARKING AREA
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Most recent storm water sample showed acceptable level of petroleum product contamination in the storm flow. Previous sampling showed quantities above allowable. Most significant area of possible POL contamination (Tactical vehicle storage/parking structure, housing tank & pump unit with 1200 gal. diesel fuel capacity) does not drain to the storm drain system and discharge probably was not entrained in the stormwater at the sampling point.

CRITERIA: Drainage water which is determined to contain petroleum products in harmful quantities must be treated prior to discharge to meet applicable water quality standards (40 CFR 112.7 (e)(2)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Recommend diversion structure (berm) be constructed within the drip line of the West parking structure, parallel to the roof edge, to minimize the flow of stormwater under the parked vehicles. That drip pans be acquired and used by all vehicles at the facility. That a containment berm be constructed at the TPU parking area. That stormwater be captured by area drain, catch basin or other means and transported either to the new wash rack oil/water separator, if it can handle the storm water capacity, or to an oileophobic in-line filter capable of extracting petroleum products from the storm flow before the water is discharged off site.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.20.3 #2 II FEDERAL FINDING POL
FINDING ID: PO.55.2
MANUAL QUESTION NUMBER: PO-020-003
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: TACTICAL VEHICLE PARKING AREA
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Evidence of diesel fuel leaking from Tank & Pump Unit. Both truck bed and sideboard are coated in a thin film of fuel. No obvious leak was apparent, but the quantity of fuel suggest more than a sloppy fuel handler. Diesel fuel is also present on the asphalt below the fuel soaked sideboard, suggesting a Class III diesel fuel leak, or small spill in the very recent past.

CRITERIA: Drainage water which is determined to contain petroleum products in harmful quantities must be treated prior to discharge to meet applicable water quality standards (40 CFR 112.7 (e)(2)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Isolate, diagnose and repair leak at TPU. Divert water from parking area. Capture and treat storm water before it leaves site.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.1.1.R #1 III ARMY/DOD FINDING POL
FINDING ID: PO.1.1.R
MANUAL QUESTION NUMBER: PO-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088 or DOD Directive 5030.41.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.5.3.R #1 III ARMY/DOD FINDING POL
FINDING ID: PO.5.3.R
MANUAL QUESTION NUMBER: PO-005-003-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All information for the ISPC is available at the facility, it has not been compiled and consolidated into a single document.

CRITERIA: The facility must have a spill contingency plan (ISCP) that addresses specific issues (AR 200-1, para 8-5a through 8-5c).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Facility manager consolidate all ISPC documentation data into a single source document.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.5.6.R #1 III ARMY/DOD FINDING POL
FINDING ID: PO.5.6.R
MANUAL QUESTION NUMBER: PO-005-006-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Full time personnel have received spill continency guidance or training, and possess documentation (training certificates, etc.). Hazard training (briefings and training films) for IDT reserve soldiers has been conducted, but records of training not maintained. Hands-on training with the IRT has not been conducted.

CRITERIA: Yearly training is required to test the effectiveness of ISCP personnel and equipment (AR 200-1, para 5-4d(2)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACT'ON(S): Conduct refreshers training for all personnel, document training with class rosters and properly file training records. Implement procedure for training and documentation as component of in-processing new accessions. Conduct spill contingency drill for IRT.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.5.7 #1 HS FEDERAL FINDING POL
FINDING ID: PO.5.7
MANUAL QUESTION NUMBER: PO-005-007
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Full time employees have received required formal training in the handling, use and potential hazards of POL products. Reserve (IDT) soldiers are provided with hazards briefings, though training documentation has not been maintained. Procedures for actions to be taken in the event of a POL product discharge appear to be understood, however, some conflicts apparent in understood tasks versus the written guidelines in the HAZCOMM plan and the ready reference pocket cards carried by unit soldiers. Mechanics are identified, and on appointment orders, as the Installation Response Team. Team training, as described by the facility manager, suggests that no hands on spill response training is being conducted. Potential that protective measure and procedures are not fully understood.

CRITERIA: All installation/CW facility personnel involved with the management and handling of oil must take part in periodic training in spill prevention and response (40 CFR 112.7(e)(10)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): In coordination with DCSENG, modify HAZCOMM document to present uniform guidance to all personnel involved. Provide additional training to IDT reserve IRT members for actions related to POL product discharges. Conduct spill containment drills with IRT to provide practical training that will build soldiers confidence in their ability to properly react to a hazardous waste discharge event.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

PO.60.1 #1 POSITIVE FEDERAL FINDING POL
FINDING ID: PO.60.1
MANUAL QUESTION NUMBER: PO-060-001
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All used oil is sampled and laboratory tested before removal from the site for recycling, or if required, hazardous waste disposal.

CRITERIA: Depending on the constituents of the used oil, (see Appendix 83), facilities are required to handle used oil as a hazardous waste or according to specific used oil requirements (40 CFR 279.10).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S):

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

SO.1.1.R #1 III ARMY/DOD FINDING Solid Waste
FINDING ID: SO.1.1.R
MANUAL QUESTION NUMBER: SO-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088, DODD 4165.60 or TN 420-47-02.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

SO.10.2.R #1 III ARMY/DOD FINDING Solid Waste
FINDING ID: SO.10.2.R
MANUAL QUESTION NUMBER: SO-010-002-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Recieved no documentation that quarterly refuse container inspections are being conducted to insure hazardous waste and industrial shop waste is not being removed with the refuse.

CRITERIA: Facility industrial shop waste receptacles should be inspected quarterly to verify that hazardous wastes are not being deposited (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Facility manager establish a routine inspection program that includes inspection of the contents of the refuse containers for unauthorized debris and waste. Establish a log/file so inspection results may be tracked.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

ST.1.1.R #1 III ARMY/DOD FINDING Storage Tanks
FINDING ID: ST.1.1.R
MANUAL QUESTION NUMBER: ST-001-001-R
FINDING CATEGORY: CLASS III
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: All current regulations not on hand at facility. Required to be maintained at ARCOM. Do not have EO 12088, TM 5-675 or TM 5-678.

CRITERIA: Copies of all relevant Federal, DOD, Army, and state/local regulations, and guidance documents pertaining to air emissions, or access to electronic bulletin boards (e.g., DENIX) should be available at the ARCOM (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Order/Obtain through publications account.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____
_____
_____
_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____
_____
_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____
_____
_____
_____

NAME/OFFICE/PHONE: _____ DATE: _____

T2.1.3.R #1 POSITIVE ARMY/DOD FINDING Asbestos
FINDING ID: T2.1.3.R
MANUAL QUESTION NUMBER: T2-001-003-R
FINDING CATEGORY: POSITIVE
FINDING TYPE: Positive EXISTING NOV: NO
LOCATION: ADMINISTRATION BUILDING AND AMSA SHOP
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: A complete asbestos survey was conducted for the facility. Several ACM containing materials were identified, including VAT tile in the center entry and hall and ACM concrete joint sealer in front of the AMSA bay door. The VAT and mastic is to be abated and removed under contract with Navy DPW. New VCT will installed as a self help project by the resident engineer platoon. The joint sealer has been encapsulated with an overlay of a non-ACM containing elastomeric joint sealer until it can be abated at a later date.

CRITERIA: Facilities are required to conduct an asbestos survey (AR 200-1, para 10-2j and 10-3b(1) through 10-3b(3)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S):

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

T3.1.6.R #1 HS ARMY/DOD FINDING Radon
FINDING ID: T3.1.3.R
MANUAL QUESTION NUMBER: T3-001-006-R
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: IX ARCOM has not provided the facility manager with a copy of a Radon survey for the facility, nor any documentation identifying any exemption or exclusion from the requirement. The facility manager has been orally informed that no Radon survey is required for this facility.

CRITERIA: LTM for radon is required for Priority 2 and 3 structures if the results of the initial phase measurements of Priority 1 structures indicated radon concentrations greater than 4 pCi/L (AR 200-1, para 11-5b(2)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): IX ARCOM provide written documentation of Radon survey, or alternately, certified results of Radon testing for priority 1 facilities with results within established limits.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

WA.10.4 #1 II FEDERAL FINDING

Wastewater

FINDING ID: WA.10.4
MANUAL QUESTION NUMBER: WA-010-004
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Stormwater run-off/discharge from AMSA yard area drain, existing decommissioned wash rack drain, tactical vehicle storage/parking area, parking area East of the AMSA shop, and POV parking area Southeast of the Administration wing all drain to natural grade or natural drainage channels that carries stormwater directly to waterway.

CRITERIA: Even where not covered by NPDES permits, stormwater discharge on the installation/CW facility should be uncontaminated and periodic surveillance of these discharges should be completed (MP).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Regrade rear area of site, and provide new area drain/catch basin to intercept stormwater. Provide in-line oilephobic filter to capture POL waste products, or route storm drain system to new oil/water separator at new wash rack if it can accomodate the storm water volume.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

WA.10.5 #1 II FEDERAL FINDING Wastewater
FINDING ID: WA.10.5
MANUAL QUESTION NUMBER: WA-010-005
FINDING CATEGORY: CLASS II
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: TACTICAL VEHICLE STORAGE/PARKING AREA
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Stormwater discharge from tactical vehicle storage/parking sheds discharges to natural grade and is not captured in storm sewer system. Potential that discharge, and any contamination entrained by it, was not captured in routine sampling of stormwater run-off.

CRITERIA: Samples must be collected in accordance with proper collection, testing, preservation, and shipping procedures in Standard Methods for the examination of Water and Wastewater (40 CFR 136.1 through 136.4).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Intercept all stormwater and route through pollution abatement system. See finding WA.10.4.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

NAME/OFFICE/PHONE: _____ DATE: _____

WQ.1.3 #1 HS FEDERAL FINDING

Water Quality

FINDING ID: WQ.1.3
MANUAL QUESTION NUMBER: WQ-001-003
FINDING CATEGORY: HEALTH/SAFETY
FINDING TYPE: Negative

EXISTING NOV: NO

LOCATION:
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: No exterior water faucet is provided with a vacuum breaker or other backflow prevention device, typical of eleven hose bib faucet fixtures. Backflow through exterior faucet has potential of drawing unhealthy products into the domestic drinking water system.

CRITERIA: Installations/CW facilities are required to comply with state and local water quality regulations (EO 12088, Section 1-1 and 42 USC 300h-7(h)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Provide vacuum breaker (VB) back flow preventer (BFP) style hose bib faucets at each exterior domestic water outlet.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

_____

_____

_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA? Y__ N__
EXPLAIN:_____

_____

_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS: _____

_____

_____

_____

NAME/OFFICE/PHONE: _____ DATE: _____

ENCLOSURE 7
ARMS STORAGE STRUCTURAL CERTIFICATION

M TAB TAB

SECURITY CONSTRUCTION STATEMENT

For use of this form, see AR 190-11; the proponent agency is ODCSOPS

INSTRUCTIONS

This form will be prepared in three copies. The original will be maintained permanently in the files of the individual signing the form. The first copy will be maintained permanently in the using unit/organizational files. The second copy will be filed permanently in the arms/ammunition storage facility. All entries except item 7 will be typewritten.

1. THE CONSTRUCTION OF THIS FACILITY CONFORMS TO THE CRITERIA OF AR 190-11 WHICH IS IN EFFECT ON THIS DATE EXCEPT AS INDICATED HEREON

This facility meets category II construction standards of Appendix G, AR 190-11 Physical Security of Arms, Ammunition and Explosive. Data obtained from construction plans and site inspection.

2. ROOM AND BUILDING NUMBER, STREET AND INSTALLATION ADDRESS

3. THIS APPLIES TO

a. X AN EXISTING STRUCTURE

b. ___ CONSTRUCTION OF NEW FACILITY

c. ___ MODIFICATION OF EXISTING FACILITY *(Explain)*

4. NAME OF OFFICIAL SIGNING IN ITEM 7 BELOW	GRADE	6. ADDRESS OF OFFICIAL
WARREN H.W. LEE	LTC/O-5	2058 Maluhia Road Fort DeRussy, HI 96815-1997
5. ORGANIZATION		
HQ, IX Corps (Reinf)/9th ARCOM		

7. SIGNATURE Warren H.W. Lee DATE SIGNED 16 Sept 1995

DA FORM 4604-R, 1 MAR 77

ENERGY AUDIT REPORT

for the

SFC MINORU KUNIEDA USARC

HILO, HAWAII

Prepared by the

416TH ENCOM ESG-WEST
MOFFETT FIELD, CALIFORNIA

Performed on
18 MARCH 1996

Prepared on
20 MARCH 1996

USAR FACILITY ENERGY AUDIT REPORT

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Section 1 - Facility Data Sheet
USAR Facility Energy Audit Report
Supporting RSC

FACILITY NAME: **SFC MINORU KUNIEDA USARC**

LOCATION: **HILO, HAWAII**

FACILITY ID NUMBER: **HI-2104PHH08**

FACILITY TYPE: USARC __X__; OMS __X__; AMSA ____; ECS ____;
Specify Other: _____

TELEPHONE NUMBER OF FACILITY MANAGER: (808) 935-9288

AUDIT TEAM DESIGNATION: **ENGINEER SUPPORT TEAM WEST, IX CORPS DETACHMENT, HILO TEAM**

Address: P.O. BOX 400, MOFFETT FIELD, CA 94035

Team Leader: LTC Joseph Moscariello

Team Members: MAJ William Harrison
SGM Robert Fisher
MSG Charles Kimzey

FACILITY PERSONNEL INTERVIEWED: CPT Richard P. Takishita

AUDIT DATE: 18-20 MARCH 1996

DATE OF LAST AUDIT: N/A

Section 2 - Executive Summary
USAR Facility Energy Audit Report

INSTALLATION NAME: **SFC MINORU KUNIEDA USARC**
INSTALLATION NUMBER: **HI-2104PHH08**
INSTALLATION LOCATION: **HILO, HAWAII**
DATE AUDIT CONDUCTED: 18-20 MARCH 1996

1. An Energy Audit was performed on the SFC MINORU KUNIEDA United States Army Reserve Center with the audit results identified in the following pages. The center consists of three buildings: The Administration Building, The Assembly Hall, and The OMS shop. The KUNIEDA USARC was constructed in 1964 and expanded in 1977 and 1979.

a. The building is occupied by an Engineer Platoon, Company A, 411th Engineer Battalion and Detachment 1, Company B, 100th Battalion, 422nd Infantry and the HILO Detachment of the 1085th Training Exercise Maneuver Group. Approximately 96 soldiers drill at the center one weekend a month. Four soldiers work full time at the USARC.

b. The USARC is located at 470 West Laikaula Street in the City of Hilo, Hawaii. All the buildings are situated a 3.3 acre government owned site, across from the University of Hawaii Campus.

c. The buildings are used on a full-time basis in approximately 5% of the floor area. Between 85% and 90% of the overall floor space is used during drill weekends and between 5% and 10% are not used.

2. The Administration Building is the only building that is air-conditioned. The original AC unit is only operated during use of the class rooms located at the east side of the building. There are plans to replace this unit in the near future. Lighting has been upgraded when the addition was added to the west. The addition to the west has AC which supplies cooling to the office space and with the door open, to the orderly room. Doors to the east and west of the hall are missing weather stripping. These doors are planned to be upgraded. Insulation is standard for the area, from non existent to minimal but is in good condition.
Lighting does not meet current energy efficiency requirements as fixtures do not use electronic ballast and T8 lamps.
Window shades are used in all offices and class rooms but are not installed in the main entrance to the south.
Construction of the building is masonry walls and metal roof. The ceiling is vaulted in the library and orderly room. The rest of the building has an attic space between room and suspended ceiling. .

The Assembly Hall contains the kitchen, an insulated 375 gal hot water storage tank, unit equipment storage areas and a locker room. The doors to the east of the assembly hall have broken glass and missing weather stripping. There are plans to replace these doors. Construction is masonry walls and metal roof.

The OMS shop contains a maintenance bay, office, storage area and a small storage area (battery room). There is an open faced storage shed behind the main shop that houses a 5 Ton crane, air compressor and open maintenance bay. Construction is metal wall and roof.

a. Many of the energy conservation opportunities noted in the audit can be achieved with minimal costs. These include weather-stripping doors and sealing windows.

b. Others will require substantial amounts of money to achieve energy savings. Upgrading fluorescent lighting and ballasts would require a significant initial investment, but estimates for the RSC have shown a favorable return on the investment.

3. The Reserve Center personnel are careful to turn off lights and cooling in unused areas and are careful to keep doors and windows closed and use blinds effectively. The center personnel were cooperative in helping to prepare this audit and in identifying savings opportunities.

4. A copy of this report will be submitted to the 416th ENCOM FETDA ESG Design Team for creation of the appropriate documentation to obtain ECIP, FEMP, or other available Energy Conservation funding. Section 6 of this report identifies several potential Energy Conservation Opportunities, as presented in the A&E Guide to Energy Conservation in Existing Buildings.

JOSEPH MOSCARIELLO
LTC, EN, USAR
Team Leader

Section 3 - Utility Data
USAR Facility Energy Audit Report

ENERGY CONSUMPTION SUMMARY:

Average of FY 94 and 95.

I. - ENERGY COSTS	**DOLLARS**
A. - Annual Dollar Cost - Natural Gas	00000
B. - Annual Dollar Cost - Electricity	15827
C. - Annual Dollar Cost - Water	
D. - Annual Dollar Cost - Sewer	
E. - Annual Dollar Cost - Fuel Oil	NA
F. - Annual Dollar Cost - Propane	NA
G. - Annual Dollar Cost - Other Fuels	NA
H. - **TOTAL ENERGY COSTS** (A+B+C+D+E+F+G)	**15827**

II. - ENERGY CONSUMPTION	**mmBTU**
A. - Natural Gas	
1. - Energy used for hot water heating	000
2. - Energy used for space heating	NA
3. - Other natural gas energy use	000
4. - **TOTAL NATURAL GAS ENERGY USE**	**0000**
B. - Electricity Use	
1. - Electricity used for lighting	000
2. - Electricity used for air-cond.	000
3. - Other electricity use	000
4. - **TOTAL ELECTRICITY USE**	**320**
C. - Other Fuel Use (Type Fuel - NA)	
1. - Energy used for hot water heating	NA
2. - Energy used for space heating	NA
3. - Other energy use	NA
4. - **TOTAL ENERGY USE** (Other Fuels)	**NA**

TABLE I
UTILITY DATA FY 95

1. Estimated annual hot water energy consumption = 000 MBTU
   (August natural gas use X 12 - natural gas)
   (Heater input X hours of use - electric)

2. Estimated natural gas heating consumption = 000 MBTU
   (Subtract hot water consumption from total natural gas use)

3. Estimated air-conditioning electricity use = 9268 MBTU
   (Peak monthly electricity consumption minus
   12 month average consumption, X 4)

Section 3 - Utility Data - Table I Instructions
USAR Facility Energy Audit Report

-A- DATE (MONTH AND YEAR)

-B- 1000 CUBIC FEET OF NATURAL GAS CONSUMED (TAKEN FROM UTILITY BILL)

-C- NATURAL GAS ENERGY USED IN MILLION BTU

-D- $ SPENT ON NATURAL GAS (TAKEN FROM UTILITY BILL)

-E- ELECTRICITY USE IN KILOWATT HOURS (TAKEN FROM UTILITY BILL)

-F- ELECTRICITY USE IN MILLION BTU's (COLUMN -E- X 0.003413)

-G- $ SPENT ON ELECTRICITY

-H- TOTAL ENERGY USE IN MILLION BTU's (COLUMN -C- + -F-)

-I- TOTAL DOLLARS SPENT ON ENERGY (COLUMN -D- + -G-)

Section 4 - FACILITY DATA SUMMARY
USAR Facility Energy Audit Report

BUILDING & OCCUPANCY SUMMARY:

I. - BUILDING DATA	SQ. FT.
A. - Total Square Feet Heated (65-70 DEG F)	0
B. - Total Square Feet Air Conditioned (76-80)	2818
C. - Total Square Feet Conditioned (A+B)	2818
D. - Total Square Feet Un-conditioned (<55 DEG F)	10094
E. - **TOTAL SQUARE FEET OF FACILITY**	**12912**

II. - OCCUPANCY DATA (Annual)	HRS
A. - Heating Season	
1. - Total estimated hours of occupancy	NA
2. - Total estimated hours of non-occupancy	NA
3. - Total hours of Heating Season	**NA**
B. - Air-Conditioning Season	
1. - Total estimated hours of occupancy	2840
2. - Total estimated hours of non-occupancy	5920
3. - Total hours of Cooling Season	**8760**

TABLE IIA: Administration Building
FACILITY DATA

ROOM NO.&	AREA	HVAC DATA			LIGHTING DATA			OCCUPANCY DATA	
NAME	SF	CODE	HEAT (sf)	A/C (sf)	WATTS	HRS/YR	ANN KWH	HEAT hr/yr	A/C hr/yr
-A-	-B-	-C-	-D-	-E-	-F-	-G-	-H-	-I-	-J-
15 OFFICE	248	A		248	420	2080	873.6		2560
16 VAULT	326	A			210	80	16.8		
17 CORRIDOR	174	A			150	2080	312		
18 OFFICE	344	A		344	630	2080	1310.4		2650
19 XO OFFICE	116	A		116	280	2080	582.4		2650
20 CDR OFF	116	A		116	280	2080	582.4		2650
21 1SG OFF	101	A		101	280	2080	582.4		2650
22 TRNG OFF	100	A		100	140	2080	291.2		2560
23 ORDERLY	252	A		252	840	2080	1747.2		2560
24 MECH RM	320	A			400	80	32		
25 JAN CLOS	81	A			100	40	4		
26 JAN CLOS	42	A			100	40	4		
27 CORRIDOR	105	A			560	2080	1164.8		
28 MEN	151	A			280	1040	291.2		
29 LOCKERS	348	A			280	192	53.76		
30 WOMENS	78	A			100	1040	104		
31 CLASSRM	995	A		995	2100	2080	4368		480
32 TRAINING	273	A		273	420	2080	873.6		480
33 LIBRARY	273	A		273	560	2080	1164.8		2560
34 CORRIDOR	156	A			280	2080	582.4		
CUM. TOTAL	4599		0	2818	8410	29552	14940.96	0	21800

TABLE IIB: Assembly Building
FACILITY DATA

ROOM NO.&	AREA	HVAC DATA			LIGHTING DATA			OCCUPANCY DATA	
NAME	SF	CODE	HEAT (sf)	A/C (sf)	WATTS	HRS/YR	ANN KWH	HEAT hr/yr	A/C hr/yr
-A-	-B-	-C-	-D-	-E-	-F-	-G-	-H-	-I-	-J-
1 ASSEMBLY	3020				2000	192	384		
2 STORAGE	1330				595	192	114.24		
3 SUPPLY	161				140	1040	145.6		
4 KITCHEN	331				1000	192	192		
5 JAN CLOS	9				35	40	1.4		
6 FOOD STOR	82				35	192	6.72		
7 SCULLERY	116				70	192	13.44		
8 STORAGE	260				210	192	40.32		
9 WTR HTR	58				60	40	2.4		
10 LOCKERS	828				420	192	80.64		
10A CORRIDR	126				100	1040	104		
11 JAN CLOS	21				100	40	4		
12 SHOWER	90				400	192	76.8		
13 RESTRM	135				70	1040	72.8		
14 MECH 2	96				70	40	2.8		
CUM TOTAL	6663		0	0	5305	4816	1241.16	0	0

TABLE IIC: OMS Building
FACILITY DATA

ROOM NO.&	AREA	HVAC DATA			LIGHTING DATA			OCCUPANCY DATA	
NAME	SF	CODE	HEAT (sf)	A/C (sf)	WATTS	HRS/YR	ANN KWH	HEAT hr/yr	A/C hr/yr
-A-	-B-	-C-	-D-	-E-	-F-	-G-	-H-	-I-	-J-
OFFICE	264				420	2080	873.6		
STORAGE	156				140	80	11.2		
SMALL STOR	45				70	40	2.8		
MAINT BAY	1185				1260	1040	1310.4		
							0		
							0		
							0		
CUM TOTAL	1650	0	0	0	1890	3240	2198	0	0

SECTION 4.2 - FACILITY DATA - TABLE II INSTRUCTIONS
USAR FACILITY ENERGY AUDIT REPORT

-A- ROOM NAME & ROOM # (TAKEN FROM CONSTRUCTION DRAWINGS AND FIELD VERIFIED)

-B- ROOF SQUARE FOOTAGE (TAKEN FROM CONSTRUCTION DRAWINGS AND FIELD VERIFIED)

-C- HVAC CODE
H - ROOM HEATED ONLY
A - ROOM AIR CONDITIONED ONLY
HA - ROOM HEATED AND AIR CONDITIONED
U - ROOM IS UNCONDITIONED (NEITHER HEATED OR COOLED)

-D- SQUARE FEET OF HEATED AREA (ROOM WITH "H" OR "HA" HVAC CODE

-E- SQUARE FEET OF AIR CONDITIONED AREA (ROOM WITH "A" HVAC CODE

-F- TOTAL WATTAGE OF ALL LIGHTING IN ROOM (DETERMINE WATTS/FIXTURE AND MULTIPLY BY NUMBER OF FIXTURES. IF FLUORESCENT FIXTURE IS INSTALLED, MULTIPLY BY 1.2)

-G- HOURS PER YEAR THAT LIGHTS ARE ON

-H- (COLUMN -F- X COLUMN G) DIVIDED BY 1000

-I- HOURS PER YEAR THAT A ROOM WITH HEATING IS ACTUALLY OCCUPIED WHILE HEATING IS ON

-J- HOURS PER YEAR THAT A ROOM WITH AIR CONDITIONING IS ACTUALLY OCCUPIED WHILE AIR CONDITIONING IS ON

Section 5 - FACILITY CHECKLIST SUMMARY
USAR Facility Energy Audit Report

I. - BUILDING CONSTRUCTION PRACTICES

	Number of Checklist Items Showing Good Conservation Practices in Effect		
Checklist Area	#YES	#NO	#N/A
A. Building Envelope	10	9	8
B. Plumbing	6	6	18
C. Electrical	15	9	0
D. HVAC	6	1	28
E. Total Responses	37	25	54

II . - OPERATION AND MAINTENANCE PRACTICES

	Number of Checklist Items Showing Good Conservation Practices in Effect		
Checklist Area	#YES	#NO	#N/A
A. Building Envelope	16	4	1
B. Plumbing	1	2	21
C. Electrical	15	0	3
D. HVAC	14	1	42
E. Total Responses	46	7	67

Section 6 - POTENTIAL ENERGY CONSERVATION OPPORTUNITIES

See A&E Guide to Energy Conservation in Existing Buildings for Energy Conservation Opportunities. Identify opportunities by ECO number in guide.

ECO # ECO Description

ECO 1 - Reduce Operating Hrs for Cooling Systems.

ECO 3 - Reduce Operating Hrs for Water Heating Systems.

ECO 7 - Lower Cooling Temperature Setpoints

ECO 12 - Install Reflective Roof Surfaces.

ECO 16 - Install Storm Windows and Multi-Glazing Areas.

ECO 21 - Use Tinted or Reflective Glazing of Films.

ECO 24 - Caulk and Weatherstrip Doors and Windows.

ECO 31 - Clean Evaporator and Condenser Surfaces of Fouling.

ECO 53 - Install Economizer Cooling Systems.

ECO 85 - Use High-Efficiency Fluorescent Lighting.

ECO 88 - Install High-Efficiency Ballasts.

ECO 95 - Use High-Efficiency Motors.

Appendix A FACILITY ENERGY AUDIT CHECKLIST
Appendix A.1 - BUILDING CONSTRUCTION CHECKLIST
Appendix A.1.1 - BUILDING ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

BUILDING ENVELOPE AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Heavily used entrances have vestibule (airlock) doorsystem.		X			
2. Wind screens installed to protect doors from prevailing winds.		X			
3. Space around outside wall penetrations well sealed to reduce infiltration.			X		CINDER BLOCK
4. Building has required insulation and it is in good condition.	X				
5. Energy efficient windows (multi-pane or storm) provided.		X			SINGLE PANE WINDOWS
6. Energy efficient doors (i.e. insulated) provided.	X				
7. Infiltration of unconditioned air minimized.	X				
8. Automatic closures and weather stripping installed on doors between conditioned and unconditioned spaces.		X			WEATHER STRIPPING
9. Is winter sun used to heat rooms?			X		
TOTALS	3	4	2	0	

Appendix A.1.2 - BUILDING CONSTRUCTION CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Domestic hot water heater and storage system separate from boiler?	X				
2. Hot water piping and storage tanks properly insulated?	X				
3. Booster heaters used on kitchen equipment?		X			
4. Self closing taps used on kitchen equipment & latrine?		X			
5. Electronic pilots used in lieu of standing gas pilots for water heaters?		X			
6. Hot water circulating pumps controlled by time switch?			X		
7. Are flow restrictors used on showers heads?	X				
8. Are steam traps used in heating system?			X		
9. Does steam trap discharge line return to boiler reservoir?			X		
10. Does steam trap overboard valve/float allow return to boiler reservoir?			X		
TOTALS	3	3	4	0	

Appendix A.1.3 - BUILDING CONSTRUCTION CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Energy efficient security lighting (fluorescent, HID) installed?	X				
2. Exterior lighting controlled by time switch or photocell?	X				
3. Walls and ceilings painted with light colored, reflective paint?	X				
4. Incandescent fixtures used only where appropriate?	X				
5. Are motion sensors used in low occupancy areas?		X			LIGHTS OFF POLICY
6. Are electronic ballasts w/T8 flourescent bulbs used?		X			T12 IN PLACE
7. Are compact flourescent bulbs used in exit lamps?	X				
8. Are electrical outlets sealed to prevent air leakage?		X			
TOTALS	5	3	0	0	

Appendix A.1.4 - BUILDING CONSTRUCTION CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Automatic setback controls or Energy Monitoring Control Systems provided for heating and cooling systems?	X				
2. Outer surfaces of boilers insulated to reduce heat loss?			X		
3. Boiler combustion air taken from top of boiler room to provide warmer air for increased efficiency?			X		
4. Thermostats are positioned away from outside walls, out of drafts, and in areas of frequent use?	X				
5. Individual controls provided to maintain lower temperatures in unoccupied areas?		X			CONTROLLED BY LOUVERS
6. Automatic louvers/dampers provided on outside air openings?	X				
7. All heating/cooling piping and equipment (pipes, valves, boilers, etc.) insulated and in good condition?	X				
8. Are radiators/heat registers shut off completely in vestibules, corridors, stairways and lobbies?			X		
9. Are drapes, shades or blinds drawn on windows where practical during cooling periods?	X				ENTRANCE DOOR SOUTH
10. All heating equipment (heat exchangers, economizers, condensate tanks) insulated and in good condition?			X		
11. Ducts passing through unconditioned spaces are insulated?	X				
12. High efficiency (EER at least 8.5) window air conditioners only?				X	
TOTALS	6	1	4	1	

Appendix A.2.1 - OPERATIONS & MAINTENANCE CHECKLIST/BLDG ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Building insulation in good condition? (No wet, crumbly, cracked, broken or missing sections)	X				
2. Windows and doors free from broken or cracked glass?	X				
3. Are storm windows installed?			X		
4. Drapes, shades, and blinds installed and utilized?	X				
5. Are windows and other areas sealed properly?	X				
6. Doors fit securely in frames and have weatherstripping?		X			BEING REPLACED
7. Are windows and skylights clean?	X				
TOTALS	5	1	1	0	0

Appendix A.2.2 - OPERATIONS AND MAINTENANCE CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Are hot water temperatures set for 100° F max at destination?		X			
2. Faucets close properly?	X				
3. Hot water to areas shut down during periods of nonoccupancy?		X			
4. Water heating and distribution systems appear to be free from leaks?			X		
5. Is steam trap output returning to boiler reservoir?			X		
6. During boiler operation, does steam trap overboard system operate minimally?			X		
7. Is the steam trap on a regular maintenance schedule?			X		
8. Has the steam trap been replaced within the previous 3 to 5 years?			X		
TOTAL	1	2	5	0	

Appendix A.2.3 - OPERATIONS AND MAINTENANCE CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Exterior lights turned off during daylight hours?	X				
2. Is there an energy conservation program?	X				
3. Are interior lights turned off in unoccupied areas?	X				
4. Partitions, lockers, etc. located so as to not unnecessarily block lighting?			X		
5. Are major appliances turned off during non drill periods?	X				
6. Have lights been removed from vending machines?	X				
TOTAL	5	0	1	0	

Appendix A.2.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ADMINISTRATION BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. All coils, boiler tubes and heat transfer surfaces clean to maintain maximum heat transfer?	X				
2. System free from steam or water leaks?		X			ANNUAL ON WORK ORDER (OLD AC)
3. Meter and gauges operational?	X				
4. Are steam traps in place and maintained properly? (Bled periodically and repaired)			X		
5. Are radiators in vestibules, corridors, stairwell, and lobbies shut off?			X		
6. Thermostat setting adjusted during periods of nonoccupancy? (50 55 DEG F for heating and 80-85 DEG F for cooling)	X				
7. Thermostat settings set at 55 DEG F for areas of physical work? (Maintenance shops)			X		
8. Are heating vents/ducts unobstructed?	X				
9. Are cooling systems shut down during periods of nonoccupancy?	X				
10. Cooling limited to occupied areas only?	X				

Appendix A.2.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC (con't)
USAR Facility Energy Audit Report

11. Doors between conditioned and unconditioned areas are closed?	X				OPEN FOR FTUS TRAFFIC
12. Central units and cooling towers are clean and free from scale?	X				
13. Is evidence of preventative maintenance (PM) schedule in effect?	X				ANNUAL
14. Is outside air used for cooling?	X				
15. Room temperatures maintained properly during cooling season? (76 80 F)	X				
16. Refrigerant and water lines free of leaks?	X				
17. Are internal heat generating units minimized? (copiers, refrigerators, etc)	X				
18. Air conditioning vents or outside air intakes are clear from obstructions?	X				
19. Are window air conditioners covered during heating season?			X		
TOTALS	14	1	4	0	

Appendix A.3 - BUILDING CONSTRUCTION CHECKLIST
Appendix A.3.1 - BUILDING ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Heavily used entrances have vestibule (airlock) doorsystem.		X			
2. Wind screens installed to protect doors from prevailing winds.		X			
3. Space around outside wall penetrations well sealed to reduce infiltration.	X				
4. Building has required insulation and it is in good condition.		X			DRILL HALL LEAKS
5. Energy efficient windows (multi-pane or storm) provided.		X			
6. Energy efficient doors (i.e. insulated) provided.	X				
7. Infiltration of unconditioned air minimized.			X		
8. Automatic closures and weather stripping installed on doors between conditioned and unconditioned spaces.			X		
9. Is winter sun used to heat rooms?	X				
TOTALS	3	4	2	0	

Appendix A.3.2 - BUILDING CONSTRUCTION CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Domestic hot water heater and storage system separate from boiler?	X				
2. Hot water piping and storage tanks properly insulated?	X				
3. Booster heaters used on kitchen equipment?		X			
4. Self closing taps used on kitchen equipment & latrine?		X			
5. Electronic pilots used in lieu of standing gas pilots for water heaters?		X			
6. Hot water circulating pumps controlled by time switch?			X		
7. Are flow restrictors used on showers heads?	X				
8. Are steam traps used in heating system?			X		
9. Does steam trap discharge line return to boiler reservoir?			X		
10. Does steam trap overboard valve/float allow return to boiler reservoir?			X		
TOTALS	3	3	4	0	

Appendix A.3.3 - BUILDING CONSTRUCTION CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Energy efficient security lighting (fluorescent, HID) installed?	X				
2. Exterior lighting controlled by time switch or photocell?	X				
3. Walls and ceilings painted with light colored, reflective paint?	X				
4. Incandescent fixtures used only where appropriate?	X				
5. Are motion sensors used in low occupancy areas?		X			
6. Are electronic ballasts w/T8 fluorescent bulbs used?		X			
7. Are compact fluorescent bulbs used in exit lamps?	X				
8. Are electrical outlets sealed to prevent air leakage?		X			
TOTALS	5	3	0	0	

Appendix A.3.4 - BUILDING CONSTRUCTION CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Automatic setback controls or Energy Monitoring Control Systems provided for heating and cooling systems?			X		
2. Outer surfaces of boilers insulated to reduce heat loss?			X		
3. Boiler combustion air taken from top of boiler room to provide warmer air for increased efficiency?			X		
4. Thermostats are positioned away from outside walls, out of drafts, and in areas of frequent use?			X		
5. Individual controls provided to maintain lower temperatures in unoccupied areas?			X		
6. Automatic louvers/dampers provided on outside air openings?			X		
7. All heating/cooling piping and equipment (pipes, valves, boilers, etc.) insulated and in good condition?			X		
8. Are radiators/heat registers shut off completely in vestibules, corridors, stairways and lobbies?			X		
9. Are drapes, shades or blinds drawn on windows where practical during cooling periods?			X		
10. All heating equipment (heat exchangers, economizers, condensate tanks) insulated and in good condition?			X		
11. Ducts passing through unconditioned spaces are insulated?			X		
12. High efficiency (EER at least 85) window air conditioners only?			X		
TOTALS	0	0	12	0	

Appendix A.4.1 - OPERATIONS & MAINTENANCE CHECKLIST/BLDG ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Building insulation in good condition? (No wet, crumbly, cracked, broken or missing sections)	X				
2. Windows and doors free from broken or cracked glass?	X				
3. Are storm windows installed?		X			
4. Drapes, shades, and blinds installed and utilized?	X				
5. Are windows and other areas sealed properly?	X				
6. Doors fit securely in frames and have weatherstripping?	X				
7. Are windows and skylights clean?	X				
TOTALS	6	1	0	0	0

Appendix A.4.2 - OPERATIONS AND MAINTENANCE CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Are hot water temperatures set for 100° F max at destination?			X		
2. Faucets close properly?			X		
3. Hot water to areas shut down during periods of nonoccupancy?			X		
4. Water heating and distribution systems appear to be free from leaks?			X		
5. Is steam trap output returning to boiler reservoir?			X		
6. During boiler operation, does steam trap overboard system operate minimally?			X		
7. Is the steam trap on a regular maintenance schedule?			X		
8. Has the steam trap been replaced within the previous 3 to 5 years?			X		
TOTAL	0	0	8	0	

Appendix A.4.3 - OPERATIONS AND MAINTENANCE CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Exterior lights turned off during daylight hours?	X				
2. Is there an energy conservation program?	X				
3. Are interior lights turned off in unoccupied areas?	X				
4. Partitions, lockers, etc. located so as to not unnecessarily block lighting?	X				
5. Are major appliances turned off during non drill periods?	X				
6. Have lights been removed from vending machines?	X				
TOTAL	6	0	0	0	

Appendix A.4.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, ASSEMBLY BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. All coils, boiler tubes and heat transfer surfaces clean to maintain maximum heat transfer?			X		
2. System free from steam or water leaks?			X		
3. Meter and gauges operational?			X		
4. Are steam traps in place and maintained properly? (Bled periodically and repaired)			X		
5. Are radiators in vestibules, corridors, stairwell, and lobbies shut off?			X		
6. Thermostat setting adjusted during periods of nonoccupancy? (50 55 DEG F for heating and 80-85 DEG F for cooling)			X		
7. Thermostat settings set at 55 DEG F for areas of physical work? (Maintenance shops)			X		
8. Are heating vents/ducts unobstructed?			X		
9. Are cooling systems shut down during periods of nonoccupancy?			X		
10. Cooling limited to occupied areas only?			X		

Appendix A.4.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC (con't)
USAR Facility Energy Audit Report

11. Doors between conditioned and unconditioned areas are closed?			X		
12. Central units and cooling towers are clean and free from scale?			X		
13. Is evidence of preventative maintenance (PM) schedule in effect?			X		
14. Is outside air used for cooling?			X		
15. Room temperatures maintained properly during cooling season? (76 80 F)			X		
16. Refrigerant and water lines free of leaks?			X		
17. Are internal heat generating units minimized? (copiers, refrigerators, etc)			X		
18. Air conditioning vents or outside air intakes are clear from obstructions?			X		
19. Are window air conditioners covered during heating season?			X		
TOTALS	0	0	19	0	

Appendix A FACILITY ENERGY AUDIT CHECKLIST
Appendix A.5 - BUILDING CONSTRUCTION CHECKLIST
Appendix A.5.1 - BUILDING ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Heavily used entrances have vestibule (airlock) doorsystem.			X		
2. Wind screens installed to protect doors from prevailing winds.			X		
3. Space around outside wall penetrations well sealed to reduce infiltration.	X				
4. Building has required insulation and it is in good condition.	X				
5. Energy efficient windows (multi-pane or storm) provided.		X			
6. Energy efficient doors (i.e. insulated) provided.	X				
7. Infiltration of unconditioned air minimized.			X		
8. Automatic closures and weather stripping installed on doors between conditioned and unconditioned spaces.			X		
9. Is winter sun used to heat rooms?	X				
TOTALS	4	1	4	0	

Appendix A.5.2 - BUILDING CONSTRUCTION CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Domestic hot water heater and storage system separate from boiler?			X		
2. Hot water piping and storage tanks properly insulated?			X		
3. Booster heaters used on kitchen equipment?			X		
4. Self closing taps used on kitchen equipment & latrine?			X		
5. Electronic pilots used in lieu of standing gas pilots for water heaters?			X		
6. Hot water circulating pumps controlled by time switch?			X		
7. Are flow restrictors used on showers heads?			X		
8. Are steam traps used in heating system?			X		
9. Does steam trap discharge line return to boiler reservoir?			X		
10. Does steam trap overboard valve/float allow return to boiler reservoir?			X		
TOTALS	0	0	10	0	

Appendix A.5.3 - BUILDING CONSTRUCTION CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Energy efficient security lighting (fluorescent, HID) installed?	X				
2. Exterior lighting controlled by time switch or photocell?	X				
3. Walls and ceilings painted with light colored, reflective paint?	X				
4. Incandescent fixtures used only where appropriate?	X				
5. Are motion sensors used in low occupancy areas?		X			
6. Are electronic ballasts w/T8 fluorescent bulbs used?		X			
7. Are compact fluorescent bulbs used in exit lamps?	X				
8. Are electrical outlets sealed to prevent air leakage?		X			
TOTALS	5	3	0	0	

Appendix A.5.4 - BUILDING CONSTRUCTION CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Automatic setback controls or Energy Monitoring Control Systems provided for heating and cooling systems?			X		
2. Outer surfaces of boilers insulated to reduce heat loss?			X		
3. Boiler combustion air taken from top of boiler room to provide warmer air for increased efficiency?			X		
4. Thermostats are positioned away from outside walls, out of drafts, and in areas of frequent use?			X		
5. Individual controls provided to maintain lower temperatures in unoccupied areas?			X		
6. Automatic louvers/dampers provided on outside air openings?			X		
7. All heating/cooling piping and equipment (pipes, valves, boilers, etc.) insulated and in good condition?			X		
8. Are radiators/heat registers shut off completely in vestibules, corridors, stairways and lobbies?			X		
9. Are drapes, shades or blinds drawn on windows where practical during cooling periods?			X		
10. All heating equipment (heat exchangers, economizers, condensate tanks) insulated and in good condition?			X		
11. Ducts passing through unconditioned spaces are insulated?			X		
12. High efficiency (EER at least 85) window air conditioners only?			X		
TOTALS	0	0	12	0	

Appendix A.6.1 - OPERATIONS & MAINTENANCE CHECKLIST/BLDG ENVELOPE
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Building insulation in good condition? (No wet, crumbly, cracked, broken or missing sections)	X				
2. Windows and doors free from broken or cracked glass?		X			
3. Are storm windows installed?		X			
4. Drapes, shades, and blinds installed and utilized?	X				
5. Are windows and other areas sealed properly?	X				
6. Doors fit securely in frames and have weatherstripping?	X				
7. Are windows and skylights clean?	X				
TOTALS	5	2	0	0	0

Appendix A.6.2 - OPERATIONS AND MAINTENANCE CHECKLIST/PLUMBING
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Are hot water temperatures set for 100° F max at destination?			X		
2. Faucets close properly?			X		
3. Hot water to areas shut down during periods of nonoccupancy?			X		
4. Water heating and distribution systems appear to be free from leaks?			X		
5. Is steam trap output returning to boiler reservoir?			X		
6. During boiler operation, does steam trap overboard system operate minimally?			X		
7. Is the steam trap on a regular maintenance schedule?			X		
8. Has the steam trap been replaced within the previous 3 to 5 years?			X		
TOTAL	0	0	8	0	

Appendix A.6.3 - OPERATIONS AND MAINTENANCE CHECKLIST/ELECTRICAL
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. Exterior lights turned off during daylight hours?	X				
2. Is there an energy conservation program?	X				
3. Are interior lights turned off in unoccupied areas?	X				
4. Partitions, lockers, etc. located so as to not unnecessarily block lighting?			X		
5. Are major appliances turned off during non drill periods?	X				
6. Have lights been removed from vending machines?			X		
TOTAL	4	0	2	0	

Appendix A.6.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC
USAR Facility Energy Audit Report

Installation **SFC MINORU KUNIEDA USARC, OMS BUILDING**
Installation No. **HI-2104PHH08**
Location **HILO, HAWAII**
Date 18-20 MARCH 1996

AREA OF EVALUATION	YES	NO	N/A	N/OBS	REMARKS
1. All coils, boiler tubes and heat transfer surfaces clean to maintain maximum heat transfer?			X		
2. System free from steam or water leaks?			X		
3. Meter and gauges operational?			X		
4. Are steam traps in place and maintained properly? (Bled periodically and repaired)			X		
5. Are radiators in vestibules, corridors, stairwell, and lobbies shut off?			X		
6. Thermostat setting adjusted during periods of nonoccupancy? (50 55 DEG F for heating and 80-85 DEG F for cooling)			X		
7. Thermostat settings set at 55 DEG F for areas of physical work? (Maintenance shops)			X		
8. Are heating vents/ducts unobstructed?			X		
9. Are cooling systems shut down during periods of nonoccupancy?			X		
10. Cooling limited to occupied areas only?			X		

Appendix A.6.4 - OPERATIONS AND MAINTENANCE CHECKLIST/HVAC (con't)
USAR Facility Energy Audit Report

11. Doors between conditioned and unconditioned areas are closed?			X		
12. Central units and cooling towers are clean and free from scale?			X		
13. Is evidence of preventative maintenance (PM) schedule in effect?			X		
14. Is outside air used for cooling?			X		
15. Room temperatures maintained properly during cooling season? (76 80 F)			X		
16. Refrigerant and water lines free of leaks?			X		
17. Are internal heat generating units minimized? (copiers, refrigerators, etc)			X		
18. Air conditioning vents or outside air intakes are clear from obstructions?			X		
19. Are window air conditioners covered during heating season?			X		
TOTALS	0	0	19	0	

Appendix B - Count and Type of Lights
USAR Facility Energy Audit Report

Identify the type of lighting fixtures used throughout the facility (area, incandescent, standard and compact fluorescent, high and low pressure sodium, mercury vapor, etc.), and the number of fixtures, size (length and number of bulbs per fixture) and the wattage of each bulb per fixture. In light fixtures utilizing ballasts, identify type of ballast used (electromagnetic or electronic).

39 ea	4 ft, 4-lamp flour fixture	6 ea	150 Watt, High Press Sodium Lamp
10 ea	4 ft, 3-lamp flour fixture	6 ea	400 Watt, Mercury Vapor Lamp
40 ea	4 ft, 2-lamp flour fixture	12 ea	250 Watt, Mercury Vapor Lamp
46 ea	4 ft, 1-lamp flour fixture	2 ea	150 Watt, Incandescent
6 ea	Exit signs (compact flour)	14 ea	100 Watt, Incandescent
		1 ea	75 Watt, Incandescent

Appendix C - Count and Type of Motors
USAR Facility Energy Audit Report

1-Phase motors identified:

Number	Size
8	< 1 HP
1	1 HP
1	2 HP

3-Phase motors identified:

Number	Size
5	3 HP
1	7.5 HP

Appendix D - Count and Type of Steam Traps
USAR Facility Energy Audit Report

There were no steam traps at this facility.

ENCLOSURE 5
SAFETY CHECKLIST ASSESSMENT

SAFETY CHECKLIST ASSESSMENT

for the

SFC MINORU KUNIEDA USARC

HILO, HAWAII

Prepared by the

416TH ENCOM ESG-WEST
MOFFETT FIELD, CALIFORNIA

Performed on
18 MARCH 1996

Prepared on
20 MARCH 1996

DEPARTMENT OF THE ARMY
416TH ENGINEER COMMAND
Engineer Support Group - West

USAR FACILITIES SAFETY CHECKLIST

GENERAL

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SPECIFIC INSPECTION CHECKLISTS

APPLICABLE?	YES	NO
SAFETY PROGRAM ADMINISTRATION	X	
BATTERY SHOP	X	
BRAKE AND CLUTCH REPAIR/TIRE SERVICING MULTI-PIECE WHEELS/ASBESTOS	X	
CHEMICAL STORAGE	X	
COMPRESSED GAS CYLINDERS	X	
CONFINED SPACE		X
ELECTRICAL/MECHANICAL	X	
FIRE SAFETY/EGRESS	X	
FLAMMABLE/COMBUSTIBLE LIQUID STORAGE	X	
HOUSEKEEPING	X	
LADDERS	X	
MOTORPOOL AND MILITARY VEHICLE SAFETY	X	
WELDING OPERATIONS	X	

Checklists marked YES are applicable to this facility and are included in the report.
Checklists marked NO are not applicable and were not reviewed.

USAR FACILITIES SAFETY CHECKLIST

GENERAL

PURPOSE: This document is a multi-part safety checklist for evaluation of U.S. Army Reserve (USAR) facilities. It is structured as a series of independent checklists which may be used to conduct a screening evaluation of the safety status for USAR facilities. Checklists are structured to allow use and evaluation by qualified 416th Engineer Command, Facility Engineer TDA Team personnel, with minimal additional safety training.

CHECKLIST SUMMARY DESCRIPTION: Checklists are alphabetically listed by major subject area. A brief description of the material covered by each checklist is provided below. The evaluator should initially screen the checklists to eliminate those that obviously do not apply to the specific USAR facility being evaluated. Any "NO" answers on any checklist will require that the evaluator place a comment in the comment section of that particular checklist.

ADMINISTRATIVE: Written programs, documentation, training, etc., necessary for administration of a unit/facility safety program.

BATTERY SHOP: Acid handling, ventilation, protective clothing, and operational precautions applied to battery servicing and repair.

BRAKE AND CLUTCH REPAIR/TIRE SERVICING MULTI-PIECE WHEELS/ ASBESTOS: Protective equipment, waste handling, hazard posting, and operational precautions applied to exposure to asbestos material and multi-piece wheels during brake and clutch repair and tire servicing.

CHEMICAL STORAGE: Labeling, ventilation, fire protection, storage, and training for hazardous chemical storage.

COMPRESSED GAS CYLINDERS: Storage, equipment protection, leak detection, and operational cautions for compressed gas cylinders and tanks.

CONFINED SPACE: Cleaning, testing, ventilation, protective equipment, approvals, tools, training, rescue procedures, and operational precautions for entry into confined spaces.

ELECTRICAL/MECHANICAL: Grounding, high voltage, waste, lightning protection, and safety procedures for use with electrical and mechanical facilities equipment.

FIRE SAFETY/EGRESS: Flammable cabinet usage, signs, appliance usage, vehicle fueling, spill cleanup, fire extinguisher requirements, and egress for fire safety and personnel protection.

HOUSEKEEPING: Storage, housekeeping, aisles, personnel protective equipment, guard rails and stair opening protection.

LADDERS: Standards, maintenance, and operational precautions for use of ladders.

MOTORPOOL AND MILITARY VEHICLE SAFETY: Ventilation, equipment selection, waste handling, housekeeping, protective equipment, signage, training, certification, and operational precautions related to maintenance of vehicles in shops or motorpool areas.

WELDING OPERATIONS: Protective equipment, ventilation, fire protection, maintenance, inspection, and operational precautions related to gas and electric arc welding operations.

SECTION 1 - SAFETY ASSESSMENT EXECUTIVE SUMMARY
FOR THE USAR SAFETY ASSESSMENT OF:

INSTALLATION NAME: SFC Minoru Kunieda USARC
INSTALLATION NUMBER: HI-2104PHH08
INSTALLATION LOCATION: 470 W Lanikaula St., Hilo, HI

1. The SFC Minoru Kunieda USAR Center was assessed on 18-20 March 1996 by the ESG-West, 416th ENCOM, Facility Evaluation Team (FET). The center consists of five buildings including: 1) a unit administration building; 2) a Unit Assembly Hall; 3) a OMS facility with a unit vehicle maintenance shop; 4) a Vehicle Maintenance shed; and an Equipment shed. A new vehicle washrack was currently under construction and the project will be completed in FY 96.

2. The safety assessment was conducted using the checklist created by the USARC Safety Office, and using 29 CFR Part 1910, September 1994 as a reference. The results of this assessment are as follows: one Risk Assessment Code (RAC) 1, three RAC 2, twelve RAC 3, ten RAC 4, ten RAC 5 items were identified. The Risk Assessment Codes are assigned to indicate the level of severity for the non-compliant item and are detailed in AR 385-10. RAC 1 is Critical, RAC 2 is Serious, RAC 3 is Moderate, RAC 4 is Minor, and RAC 5 is Negligible. RAC 1 and 2 findings should be given immediate attention to preclude serious injury or damage.

3. The only RAC 1 finding was a temporary electric service cable installed by an on site contractor. This condition was brought to the contractor's attention by the facility manager and corrective action was done immediately. The RAC 2 findings are as follows: an emergency deluge shower and eye wash is needed at the HAZMAT storage facility; personnel using respirators do not receive yearly pulmonary function and fit testing from a qualified instructor; there is an electrical junction/90 degree pull box located on the side of the OMS that is severely rusted with a resulting hole in the bottom. The remaining findings were classified as RAC 3, 4, or 5, which are less severe, however still require corrective action.

4. The facility is maintained in an excellent manner. It is obvious that safety is a top priority . The Facility Manager, CPT Takishita was extremely helpful and took immediate action to have many of the findings corrected while we were on site.

Joseph Moscariello
LTC, EN, USAR
Team Leader

Safety Assessment Overview Sheet

Date of Inspection:	18 March 1996
Facility Name:	SFC Minoru Kunieda USAR
Location:	470 W. Lanikaula St. Hilo, Hawaii
Installation Number:	HI-96720-4038
Type of Facility, Specify (USARC, OMS, AMSA, ECS, Flight, OTHER):	USARC & OMS
Support Installation:	Ft Shafter
FE Team:	Hilo Team
Evaluation Team Members:	LTC Joseph Moscariello MAJ William Harrison SGM Robert Fisher MSG Charles Kimzey
Team Leader:	LTC Joseph Moscariello
Address:	ESG-West Bldg.25 P.O. BOX 400 Moffett Field, CA 94035-1000
Phone:	(415) 561-5733 FAX (415) 561-3603
Persons Interviewed:	CPT Richard P. Takishita

Date of Evaluation: 18 March 1996

Comments: Total Risk Assessment Codes (RAC) are as follows:

RAC 1 (Critical): Corrected on spot

RAC 2 (Serious): 3

RAC 3 (Moderate): 12

RAC 4 (Minor): 10

RAC 5 (Negligible): 10

REFERENCES

1. Code of Federal Regulation (CFR) 1910 Labor
   Note: All references to 29 CFR 1910 will be in the form 1910.xxx
2. ANSI C2 National Electrical Safety
3. ANSI Z358.1 Emergency Eyewash and Shower Equipment
4. ANSI Z41 Safety-Toe Footwear
5. ANSI Z89.1 Industrial Workers, Protective Headwear
6. ANSI Z87.1 Occupational and Educational Eye and Face Protection
7. AR 11-34 The Army Respiratory Protection Program
8. AR 385-10 The Army Safety Program
9. AR 385-55 Safety, Prevention of Motor Vehicle Accidents
10. AR 40-5 Preventive Medicine
11. AR 420-90 Fire Prevention and Protection
12. AR 700-68 Storage and Handling of Compressed Gases and Gas Cylinders
    ASME Boiler and Pressure Vessel Code
13. DA Pam 40-501 Hearing Conservation
14. DOD 4145.19-R-1 Storage and Material Handling
15. FM 10-68 Aircraft Refuelling
16. FM 10-69 Petroleum Supply Point Equipment and Operations
17. FM 43-5 Unit Maintenance Operations
18. National Electrical Code (NEC), ANSI/NFPA 70
19. National Fire Protection Agency (NFPA) 410
20. TB 43-0212 Army Oil Analysis Program Guide for Leaders and Users
21. TB 43-0151 Inspection and Test of Air and Gas Compressors
22. TB 385-4 Requirements for Maintenance of Electrical and Electronic Equipment
23. TB Med 503 the Army Industrial Hygiene Program
24. TC 11-6 Grounding Techniques
25. TM 9-2320-209-20-3-2 Organizational Level for 2 1/2 ton, 6X6, M44A1, and M44A2 Series
26. TM 9-6140-200-14 Operator's, Unit, Direct Support and General Support Maintenance Manual for Lead-Acid Storage Batteries
27. TM 38-410 Storage and Handling of Hazardous Material

ACTIVITY/AREA: SAFETY PROGRAM ADMINISTRATION
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Has the military or civilian leader appointed, in writing, a unit/facility safety representative/director/ officer? (AR 385-10)	X		
2. Do performance standards for military and civilian managers and supervisors include accident prevention and Occupational Health responsibilities as a rating element? (AR 385-10)	X		
3. Has each unit/activity published a standing operating procedure (SOP) that covers all safety responsibilities, and specifically includes areas, such as motor pools, field training, shop safety, and weapons safety. (AR 385-10)		X(1)	
4. Are DA Form 285s (Accident Reporting Form) or DA 285-AB-R (Abbreviated Ground Accident Report Form) completed, as required, for each accident (Class D and above) and is it submitted through appropriate channels (Class C and above)?	X		
Are blank DA Form 285's available? (AR 385-40)	X		
5. Is there a DD Form 2272 (DOD Safety and Occupational Health Protection Program) poster on the unit activity board? (AR 385-10)	X		
6. Are the following Army regulations maintained on file in the official publications library? (AR 385-10)			
a. AR 385-10, Army Safety Program	X		
b. AR 385-40, Accident Reporting and Records	X		
c. AR 385-55, Prevention of Motor Vehicle Accidents	X		
d. AR 672-74, Army Accident Prevention Awards		X(2)	
7. Are military/civilian leaders ensuring that safety related posters and other safety related materials are given the widest possible dissemination? (AR 385-10)	X		
8. Are employees in occupations that could be hazardous to their health (i.e. asbestos, noise) enrolled in the Medical Surveillance Program? (AR 40-5)			X
9. Are all military/civilian employees provided with appropriate personal protective equipment (i.e. respirators, ear plugs, safety glasses, gloves) and trained in its use? (AR 40-5, AR 385-10)	X		
Is the training documented? (1910.132)		X(3)	
10. Is there a "Hazard Communication Program"? (1910.1200)		X(3)	
a. Is there a written internal policy available?		X(3)	
b. Has documented initial training and subsequent hazard specific training (i.e. new processes involving chemicals, etc.) been conducted?	X		
c. Are all containers that contain chemicals marked/labeled as to their contents?	X		
d. Are Material Safety Data Sheets (MSDS) for each chemical present, available for employee review within the work place?			
e. Has an inventory listing been prepared of all chemicals stored/used in the workplace and is it readily available?		X(4)	

11. Is there an installation/unit hazard abatement plan for all identified RAC 1 and RAC 2 hazards? (AR 385-10, TB MED 503)			X
12. Are eye and noise hazardous areas/equipment properly identified and labeled? (1910.133, 1910.145, AR 40-5, TB MED 501)			X
13. Are hearing protective devices and safety eyeware provided for visitors to hazardous areas? (1910.132, AR 385-10)			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): SOP needs updated. RAC 4

(2): Needs to get AR 672-74. RAC 5

(3): Needs documentation/ written policy. RAC 4

(4): Needs inventory of chemicals stored/used. RAC 4

ACTIVITY/AREA: BATTERY SHOP
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Is a deluge shower and eyewash provided in the Battery Shop? Is the area under the shower free of clutter? Is the eyewash tested weekly and is the test recorded? (1910.153)	X X	 X (3)	
2. Is functional ventilation provided? Is the ventilation interlocked with the battery charger to ensure that the system is operating when batteries are charging? (1910.178, NFPA 410)	X X		
3. Is electrical equipment effectively grounded? If there are over five battery charging stations, is the electrical equipment, including the exhaust system, rated for a Class I area? (1910.304, NEC)	X		X
4. Is smoking prohibited in the charging area? (1910.178)	X		
5. Have employees received training on the hazards, procedures, and precautions as they relate to safe handling and maintenance of batteries? (1910.1200) Is this training documented? (1910.1200)	X	 X (1)	
6. Are protective gloves, apron, and chemical splash goggles (or full-face shields) available for use by battery shop personnel? (1910.132) Are they stamped with ANSI Z 87.1 approval, and are they in good condition? (1910.132) Have employees been trained in the use of this equipment and is it documented?? (1910.132)	X X	 X (1)	
7. Is there an approved SOP for the Battery Shop? (TM 9-6140-200-14)		X (4)	
8. If nickel-cadmium batteries are serviced, is the servicing done in separate facilities from lead-acid batteries? (TM 9-6140-200-14)			X
9. Is there equipment/provisions available for neutralizing and flushing spilled acid? (1910.178)	X		
10. Is distilled water available to fill batteries? (TM 9-6140-200-14)	X		
11. Is a Class C fire extinguisher available in the shop area? (1910.155)	X		
12. Personnel that work in the battery shop require medical monitoring. Are these personnel included in the unit's medical monitoring program? (AR 40-5)			X (2)

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): Motor SGT clearly provides training and has unwritten SOP, however, no documentation maintained. RAC 4
(2): Recommend this AR 40-5 be checked (Not available on site).
(3): Testing of eyewash not recorded. Motor SGT corrected on spot. RAC5
(4): Needs written SOP. RAC 4

ACTIVITY/AREA: BRAKE AND CLUTCH REPAIR/TIRE SERVICING MULTI-PIECE WHEELS/ASBESTOS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are brake and clutch repair services performed in designated areas and are they properly posted with asbestos exposure warning signs (e.g. "Asbestos, Dust Hazard, Avoid Breathing Dust, Wear Assigned Personal Protective Clothing and Equipment, Do Not Remain In Area Unless Your Work Requires It, Breathing Asbestos Dust May Be Hazardous To Your Health")? (1910.1001)		X(1)	
2. During brake/clutch servicing, do workers use an air purifying respirator, either single use or with replaceable cartridges, equipped with high efficiency particulate (HEPA) filters approved by the Mine Safety and Health Administration (MSHA) or the National Institute for Occupational Safety and Health (NIOSH)? (1910.1001)	X		
3. During all procedures following the removal of the wheels and/or clutch housing assemblies, to include servicing and cleaning of components, do workers wear approved respirators that provide protection from asbestos exposure? (1910.1001)	X		
4. Is asbestos-containing dust first cleaned from brake drums, brake backing plates, brake assemblies, and clutch assemblies, using a wet spray method or an industrial-type vacuum cleaner equipped with a HEPA filter system prior to servicing? (1910.1001)	X		
5. After vacuum cleaning or wet spray, are any remaining dust particles removed by use of a damp rag? (1910.1001)	X		
6. Is compressed air or dry brushing prohibited for cleaning dust from brake and clutch assemblies containing asbestos? (1910.1001, TM 9-2320-209-20-3-2)	X		
7. If washed in water/solvent, is a container placed under the assemblies to catch the runoff, and to trap the dust and debris in the solution? (1910.1001)	X		
8. When used, are rags rinsed/wrung over a drip pan? Are rags appropriately disposed of following use? (1910.1001)	X		
9. During arcing and riveting operations, are respirators worn? (1910.1001)			X
10. Is local exhaust provided in work areas were grinding/drilling machines are used for maintenance of asbestos parts/assemblies? (1910.1001)			X
11. Is all asbestos waste disposed of properly in accordance with 29 CFR 1910.1001?	X		
12. Have personnel been trained to safely service tires (for the rim type being serviced)? (1910.177)	X		
13. Does the facility have a serviceable tire cage? Is a portable tire cage available for field exercises? (1910.177)	X		
14. When inflating tires, do employees remain clear of the lock ring trajectory area? (TM 9-2610-200-20)	X		

15. Does the facility utilize an air hose with a clip-on-chuck and air line valve with a pressure gauge or a preset regulator of sufficient length to allow employee(s) to stand outside the trajectory? (1910.177, TM 9-2610-200-20)	X		
16. Does the facility have current charts or rim manuals containing instructions for the type of wheel being serviced? (1910.177)	X		

COMMENTS: (Include item number and location for each comment. Add extra pages if necessary.)

NOTE (1): Shop areas are extremely neat and clean. Signs have been ordered. RAC 3

ACTIVITY/AREA: CHEMICAL STORAGE
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Is proper separation and compatibility adhered to in the storing and handling of chemicals? (TM 38-410)	X		
2. Have all personnel been trained regarding the properties of the hazardous materials that they handle? Is this training documented? (1910.1200, TM 38-410)	X	X(1)	
3. Are all containers conspicuously labeled to indicate the identity and nature of the substance contained? (TM 38-410)	X		
4. Are periodic inspections made to ensure that chemical storage containers are serviceable/undamaged? (TM 38-410)	X		
5. Is a deluge shower and emergency eyewash provided where the spillage of corrosive chemicals or other hazardous materials is possible? Is this equipment within a straight line distance of less than 100 feet of the hazard with no obstacles, curves, etc. in the path of travel? (TM 38-410)	X	X(2)	
6. Is adequate ventilation of chemical storage areas provided? (TM 38-410)	X		
7. Are open flames, smoking, and other sources of ignition prohibited? (TM 38-410)	X		
8. Does the installation/facility have an approved Spill Prevention Control and Countermeasure Plan? (TM 38-410)	X		
9. Are eyewash and emergency showers flushed weekly? (ANSI Z358.1-1990)		X(2)	

COMMENTS: (Include item number and location for each comment. Add extra pages if necessary.)

NOTE (1): Training is not documented. RAC 5

(2): Facility manager acknowledged and will order a self-contained unit to be placed at storage shelter. RAC 2

ACTIVITY/AREA: COMPRESSED GAS CYLINDERS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Is smoking prohibited within 50 feet of compressed gas storage areas and are "NO SMOKING" signs posted? (AR 700-68)	X		
2. When cylinders are stored inside of buildings, are they stored in a well protected, well ventilated, dry location, at least 20 feet from highly combustible materials such as oil or excelsior? (1910.253)		X(1)	
3. Are oxygen cylinders in storage separated from fuel gases or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a non-combustible barrier at least five feet high having a fire-resistant rating of at least 1/2 hour? (1910.253)		X(3)	
4. When cylinders are not in use, are valves closed tightly and valve protector caps installed? (1910.253)	X		
5. When cylinders are standing upright during use or storage, have precautions been taken to prevent accidental upsetting or falling (e.g. chained or strapped to structure)? (1910.253)		X(2)	
6. Are pressure relief devices and gauges in good operating condition? (1910.252)	X		

COMMENTS: (Include item number and location for each comment. Add extra pages if necessary.)

NOTE (1): Two propane tanks are stored in Mess SGT's office. Should not be stored in area occupied by personnel. RAC 3

(2): Oxygen tank in OMS is free standing against wall. RAC 3

(3): Oxygen cylinders in Medical room stored in plywood cabinets with combustibles. RAC 3

ACTIVITY/AREA: CONFINED SPACE
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

All questions were taken from 29 CFR 1910.146.

ITEM	YES	NO	NA
1. Does the unit/facility have any areas that meet the definition of a permit required confined space IAW 1910.146?			X

If the answer to question 1 is yes, continue with this checklist.

2. Are signs posted that are similar to "DANGER - PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER"?			X
3. Is there a written confined space entry program?			X
4. Have personnel been trained in the confined space entry program?			X

If a confined space entry is in process during the inspection, observe the entry and answer the following questions:

5. Is entry necessary?			X
6. Are the instruments used in atmospheric testing properly calibrated?			X
7. Was the atmosphere in the confined space tested for the following (in the order listed)? a. An oxygen content at least 19.5% and not more than 21%? b. Flammable gases? c. Potential toxic air contaminants?			X
8. If necessary, was the space ventilated before entry? If it was ventilated, was it retested before entry was allowed?			X
9. Is the atmosphere in the space monitored while work is on-going?			X
10. Is the air intake for the ventilation system located in an area that is free of combustible dusts, vapors, and toxic substances?			X
11. Are MSHA/NIOSH approved respirators, of the type required, available at the work site?			X
12. Can personnel get through the opening into the confined space with a respirator on?			X
13. Have personnel been trained in proper use of a respirator?			X
14. Is there a standby person on the outside in constant visual and/or auditory communication with the person on the inside?			X
15. Will the standby person be able to see and/or hear the person inside at all times?			X
16. Have procedures been developed and implemented for summoning rescue and emergency services? Has the standby person been trained in these rescue procedures?			X

17. Are safety lines and harnesses available if they will be required to remove the person in an emergency?			X
18. Has a confined space entry permit been issued?			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

ACTIVITY/AREA: ELECTRICAL/MECHANICAL
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are live parts of electrical equipment operating at 50 volts or more guarded against accidental contact by being enclosed in approved cabinets or other approved enclosures? (1910.303)	X		
2. Is installed electrical equipment free from recognized hazards likely to cause death, serious physical injury, or fire? (1910.303)		X(3)	
3. Are outside power lines located: a minimum of 10 feet above sidewalks or platforms; 12 feet over areas subject to vehicle traffic, other than trucks; 15 feet for truck traffic; and a minimum of 18 feet over public streets, alleys, roads, and driveways? (1910.304)	X		
4. Are receptacles grounded by being installed in a complete metallic raceway or by a separate grounding conductor (3 wire) and all receptacles electrically connected to the grounding conductor (wire)? (1910.305)		X (1)(2)	
5. Does each electrical outlet box, pull box, junction box, and cabinet have an installed face plate, cover or canopy cover and are unused openings in cabinets and boxes effectively closed? (1910.305)	X		
6. Is water or moisture prevented from entering/accumulating within electrical cabinets, panel boards and junction boxes? (1910.305) Are weatherproof enclosures used in outside or wet locations? (1910.305)	X	X(4)	
7. Is motor operated equipment (i.e. hand held motor operated tools, portable hand lamps, refrigerators, air conditioners, etc) properly grounded with a three prong plug? (Note: Appliances protected by an approved system of double insulation need not be grounded.)? (1910.304)	X		
8. Are flexible cords and cables prohibited from use as substitute for permanent wiring of a structure, and prohibited from being run through holes in walls, ceilings, floors, doorways, windows or similar openings? (1910.305)	X		
9. Are personnel prohibited from wearing bracelets, watches, rings, or other metal objects when troubleshooting, repairing or calibrating electronic equipment? (1910.301)	X (5)		
10. Are attachment adapter plugs with wire "pigtails" prohibited from being utilized? (NEC 70)	X		
11. Has a written Lockout-Tagout policy been established when work is performed on or near de-energized circuit parts or equipment in any situation where there is a danger of injury due to unexpected energization of the circuit parts or unexpected start up of the equipment (i.e. forging equip, power presses, milling equip, woodworking equip, hoisting equip)? (1910.312, NEC 70E)			X
12. Are floor fans that have large openings in the metal blade guard, properly covered or have a protective covering (i.e. cloth mesh) that limits the opening to less than 1/2"? (1910.212)		X (6)	
13. Are electrical outlets/cords that expose live electrical parts removed from	X		

service? (1910.304)			
14. Have electrical outlets (outside/inside) that are within 6 feet of a wet area (i.e. sink) been converted to Ground Fault Circuit Interrupters (GFCI) outlets? (NEC 210-8)		X (8)	
15. Are electrically operated tools properly maintained and replaced when worn, broken or deteriorated? (1910.242)	X		
16. Has electrical equipment (e.g. generators) grounding been accomplished and is there documentation of an initial ohm's testing utilizing a multimeter (0-5 volt reading)? (FM 10-69, FM 10-68)			X
17. ELECTRICAL CABINETS: Are cabinets covers properly installed and in serviceable condition? Are circuit breakers properly labeled? Are all breakers inside the breaker box free of cracks and deterioration? Are electrical cabinet doors kept closed except for maintenance and/or servicing? Are warning signs placed on high voltage boxes and ground mounted transformers? (NEC)	X X X	X (7)	 X
18. Have personnel who work with electrical equipment, circuits, or transmission lines been trained by qualified personnel in safety procedures and methods of first aid? (TB 385-4) Have electrical workers been taught cardiopulmonary resuscitation (CPR) standard techniques by a certified instructor? Is refresher training provided?			X
19. Are entrances to buildings, rooms, and other guarded locations containing exposed live parts, locked and marked with conspicuous warning signs forbidding unqualified persons to enter? (1910.303)	X		
20. When working in an electrical (70 volts or higher) equipment shop, a Safety Board must be available to handle electrical emergencies. It must include (a) FM 21-11 First Aid for Solders" (b) emergency procedures (c) emergency telephone numbers (d) rope, halyard, 3/8 inch, 25 feet, NSN 4020-00-174-3031 (e) flashlight, NSN 6230-00-264-8261 (f) safety goggles, NSN 4240-00-052-3776 (g) General purpose First Aid Kit NSN: 6545-00-922-1200 (h) Rubber gloves, (j) safety hook, AWG #10 stranded, with clips and (k) a ground cable 30000 volts NSN: 8415-00-782-21 0/41/42/43 (i) ground stick Are all of these items available? (TB 385-4)			X
21. Are markings to include manufacturer's name/trademark and voltage/ current/ wattage ratings present on equipment and of sufficient durability to withstand the environment where present? (1910.303)	X		
22. (DATA PROCESSING SYSTEMS-DISCONNECTING MEANS) - Is a disconnecting means provided and readily accessible to the operator at the principle exit door to disconnect the power to all electronic equipment in data processing or computer rooms? (1910.306)			X
23. Are all alternating current systems of 50 volts to 1000 bolts effectively grounded? (1910.304)	X		

24. Is the path to ground from circuits, equipment, and enclosures permanent and continuous? (1910.304)	X		
25. Has the facility grounding system been evaluated within the last 12 months to assure serviceability and compliance with the National Electric Code? (TB 385-4)		X (11)	
26. Are boilers/furnaces properly labeled or identified? (TB 43-0151)			X
27. Are boiler/furnace operating instructions available for use and inspection? (TB 43-0151, ASME)			X
28. Are gas/fuel lines located in mechanical room labeled or identified? (TB 43-0151, ASME)		X (9)	
29. Are emergency shut off valves for gas/fuel lines identified? (TB 43-0151, ASME)		X (9)	
30. Are guards/shields, to prevent worker entanglement, properly installed on motors, pumps, gears, belts, and fans?	X		
31. Is the mechanical room adequately ventilated to allow for proper boiler or furnace operations?	X		
32. Is the mechanical room clean, free of leaks/spills and other debris, as well as stored items?	X		
33. Are the pressure shut-off valve and/or pressure relief valves on air compressors, boilers, water heaters, and other such equipment functional? (TB 43-0151)		X (10)	

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): Non-three wire extension cord...no ground conductor, in Commander's room. RAC 3

(2): Non-three wire adapter plug (white) in Training Room. RAC 3

(3): Temporary service cable from building (where gantry crane is located) is installed in a hazardous manner. Specifically, type SE cable supported by "clothes line rope" mounted against metal builing frame. Facility manager took immediate corrective action...responsible contractor on site contemporaneously making correction. RAC 1

(4): OMS building has exterior feed junction box (90 degree pull box) on side of building is rusted-out...has a hole in bottom. RAC 2

(5): Very positive signs/poster has been posted.

(6): Ehaust fan in "break kitchen" is right at OSHA limit (7 ft.) above floor. Recommend that a cloth mesh be installed as extra safety measure since this area has high personnel use. RAC 5

(7): Breaker panel in hallway to "break kitchen"...breakers not labeled. RAC 5

(8): Main bldg. male latrine, wall outlet is at OSHA limit (6 ft.). Because this outlet is highly probable to be used, it is recommended that a GFI outlet be installed. GFI outlets need to be installed (to replace existing non-GFI outlets) at hand sink in Mess kitchen and outlet located to left of dishwasher sink. Facility manager took positive action to initiate replacement of these outllets contemporaneously. RAC 3

(9): Gas line feed to two burner hot plate type appliance in "break kitchen" has no gas line shut off valve. RAC 3

(10): Recommend that all hot water tank pressure relief valves be checked for proper function. RAC 5

(11): Grounding system needs to be checked IAW (TB 385-4). RAC 4

ACTIVITY/AREA: FIRE SAFETY/EGRESS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are all rags, waste, etc, soiled by combustible or flammable materials kept in tightly closed metal containers for daily disposal? (TB 55-I500-204-25)	X		
2. Are all sleeping areas equipped with operational smoke detectors for early warning of smoke and/or fire? (NFPA Life Safety Code 101)			X
3. Are "No Smoking in Bed" signs posted in the billets? (AR 420-90)			X
4. Is excess dried vegetation around buildings/bleachers/fences kept to minimum? (1910.141)	X		
5. Are emergency lights installed and operating properly? (1910.36)		X (1)	
6. Are all fire extinguishers, except pressurized water extinguishers, being hydrostatic tested every twelve years? Five years for pressurized water extinguishers? (1910.157)	X X		
7. Are posted "No Smoking" signs enforced by employees/supervisors? (AR 420-90).	X		
8. Are fire extinguishers hung on brackets or mounted in unlocked cabinets with the top of the extinguishers not more than: - 5 feet above the floor for extinguishers with a gross weight at or below 40 pounds; - 3 above the floor for extinguishers with a gross weight above 40 pounds and - not being used as door stops? (I9I0.I57 and NFPA 101)	X	X (4)	
9. Is storage of any type prohibited in furnace or boiler rooms, transformer rooms or vaults, in water heater closets, or mechanical equipment rooms. (AR 420-90)		X (2)	
I0. Is a fire plan available and posted for buildings housing I0 or more persons and/or any hazardous operation? (AR 420-90)	X		
11. Are fire extinguishers inspected monthly? (1910.157)		X (3)	
12. Is flammable storage of items in "office occupancies" prohibited, except for the amount required for maintenance and operation of building and operation of equipment? Is it stored in a closed metal container or safety can or in an inside storage room?	X X		
13. Have employers distributed portable fire extinguishers for use by employees so that the travel distance for employees to any extinguisher is never greater than: (a) Class A Fire - 75 feet (b) Class B Fire - 50 feet (c) Class C Fire 50-75 feet (d) Class D (combustible metal powers, flakes, shavings, etc) - 75 feet (1910.157)?	X		X
14. Are portable fire extinguishers using carbon tetrachloride or chlorobromomethane extinguishing agents prohibited from use? (1910.157)	X		
15. Where portable fire extinguishers have been provided for employee use in the workplace, has an educational program been provided (both initially and annually)	X		

to familiarize employees with the general principles of fire extinguisher use and hazards involved with incipient stage fire fighting? (1910.157)			
16. Are extinguishers in the proximity of a hazard located so as to be accessible in the presence of a fire without undue danger to the operator (75 ft for normal hazard occupancy and 50 ft for high hazard occupancy)? (19l0.l57)	X		
17. Is material stacked such that the minimum vertical clearance between emergency sprinklers (interior) and material(s) below is at least 18 inches? (1910.159)	X		
18. Is there an established procedures for sounding emergency alarms in the workplace? (NOTE: Direct voice communication is acceptable when there are 10 or fewer employees) (1910.165)	X		
19. Are alarm systems maintained in operating condition, except when undergoing repairs or maintenance? (1910.165)	X		
20. Are gas fired devices, which are used to generate heat for comfort such as furnaces and space heaters, vented to an external atmosphere to avoid the accumulation of combustible/noxious products of decomposition? (NFPA 54)			X

MEANS OF EGRESS

1. For multi-story buildings that require more than one exit, are the exits remote from each other and free of clutter? (1910.37)			X
2. In hazardous areas, or where employees may be endangered by the blocking of any single means of egress due to fire or smoke, is there at least two means of egress remote from each other? (l9l0.36)	X		
3. Are exits and the way of approach and travel from exits maintained so that they are unobstructed and are accessible at all times? (l9l0.26, l9l0.37)	X		
4. Do all exits discharge directly to the street or other open space that gives safe access to a public way? (l9l0.37)	X		
5. Are all exits unlocked or unfastened so that free escape is not prevented? (l9l0.36)	X		
6. Has each emergency light been tested monthly for minimum of 30 seconds and annually for a 1 1/2 hour duration? (NFPA 101)		X (4)	
7. Can all exits be reached without going through a kitchen, storage room, restroom, closet, or similar space subject to being locked? (1910.37, NFPA 101)	X		
8. When exit doors are locked, can the door be unlocked from the inside without the use of a key or special knowledge or effort? (NFPA 101)	X		
9. Are horizontal sliding or vertical doors, used as exits in lieu of side hinged swinging doors, secured in the full open position when the area is occupied? (NFPA 101) Is there a durable sign on or adjacent to the door indicating "This door to remain open when building is occupied"? (NFPA 101)	X X		
10. Are doors from a room to an exit, or to a way of exit access, of the side-hinged, swinging type? Does the door swing in the direction of exit travel for rooms with more that 50 occupants? (1910.37)	X X		

11. Is the minimum width of any way of exit access no less than 28 inches? (1910.37)		X	
12. Are all exits that are not readily visible marked by a readily visible exit sign? (1910.37)		X (5)	

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): Locker room, supply room, and Mess kitchen exit to outside have no safety/exit lights. Drill hall safety light is unplugged from electric outlet. Security issue...supply room outside exit does not lock... work order has been initiated to correct. RAC 3

(2): Mess SGT's office has cardboard boxes stored within 2 ft. of hot water tank. RAC 4

(3): OMS fire extinguisher test date Sept. 94. RAC 5

(4): No record or indication of testing. RAC 5

(5): Ref. (1) above.

ACTIVITY/AREA: FLAMMABLE/COMBUSTIBLE LIQUID STORAGE
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are employees wearing safety shoes (no nails in the sole) and neoprene gloves when handling empty fuel drums and packaged products and fuels? (FM 10-69)	X		
2. Are POL personnel wearing clothing that is not wool or other synthetic fibers such as nylon, since wool and synthetic fibers can build electrostatic charges? (FM 10-69, FM 10-68)	X		
3. Are all flammable liquids stored only in safety-type, approved containers (i.e. 5 gallon cans) with a self-closing lid on the pour spout? (A safety can is defined as a metal container with automatic closing devices on all openings and flame arresters within openings.) (1910.106)	X		
4. Are flammable and combustible materials, in the building or unit operating area, kept to a minimum (1 day supply)? Are they stored in an approved metal locker/cabinet? Are rags stored separately from this cabinet? (1910.106)	X		
5. Are flammable storage cabinets used for storage of flammable/combustible liquids? (1910.101 and 1910.106)	X		
6. Are smoking and the use of open flame or spark-producing devices (i.e. phones, tools, flashlights) prohibited in flammable/ combustible liquids handling or storage areas? (l9l0.106)	X		
7. Are "NO SMOKING WITHIN 50 FEET" signs posted in or on flammable/ combustible liquid handling and storage areas?	X (1)		
8. Is the day-to-day use of flammable/combustible liquids in buildings limited to a 1-day operation level, and stored in an approved safety can (see question 3)? (1910.106)	X		
9. Are adequate quantities of type B fire extinguishers readily available for personnel to fight fires involving flammable liquids? (1910.157)	X		
10. Are flammable/combustible liquids limited to not more than 60 gallons per storage cabinet? (1910.106)	X		
11. Are acids isolated from flammable materials? (DOD 4l45.l9-R-l)	X		
12. Are all tanks/pods, hoses, containers, and all parts of the flammable/ combustible liquid dispensing system grounded? (1910.106 and AR 385-55)	X		
13. Are buildings and compartments where flammable/combustible liquids are stored, processed, or used, ventilated? (1910.106)	X		
l4 . Are portable CO_2 fire extinguishers placed at refueling/ storage points? (FM 10-690)	X		
15. Are metal flammable storage cabinets constructed with the bottom, top, door, and sides of the cabinets with at least No. 18 gage sheet iron and double walled with a 1/2 inch air space; joints riveted, welded or made tight by some equally effective means; the door provided with a three-point lock, and the door still raised	X X		

at least 2 inches above the bottom of the cabinet? (1910.106)			

16. INSIDE STORAGE ROOMS FOR FLAMMABLES/COMBUSTIBLES

(a) Are openings to other rooms and buildings provided with non-combustible liquid-tight raised sills or ramps at least 4 inches in height, or the floor in the storage area at least 4 inches below surrounding floor? (1910.106)	X		
(b) Are openings to other rooms provided with self-closing fire doors? (1910.106)			X
(c) Is the room liquid tight where the walls joint the floor? (1910.106)	X		
(d) Is wood used for shelving, racks, dunnage, floor overplay, etc., at least 1 inch nominal thickness? (1910.106)	X		
(e) Is at least one clear aisle, a minimum of 3 feet wide, maintained at all times? (1910.106)			X
(f) Is the storage area graded in a manner to divert possible spills away from the building or other exposures or surrounded by a curb at least 6 inches high? (1910.106)		X (2)	
(g) Are storage areas protected against tampering or trespassers, where necessary, and kept free of weeds, debris and other combustible material not necessary to the storage? (1910.106)	X		
(h) Are water reactive materials stored in a different room from the room with flammable and combustible liquids? (1910.106)	X		

17. SERVICE STATIONS

(a) Is there a clearly identified and easily accessible switch(es) or circuit breaker(s) provided at a location remote from dispensing devices, including remote pumping systems, to shut off the power to all dispensing devices in the event of an emergency? (1910.106)			X
(b) Is a control provided that will permit the pump to operate only when a dispensing nozzle is removed from its bracket on the dispensing unit and the switch on this dispensing unit is manually actuated? Does this control also stop the pump when all nozzles have been returned to their brackets? (1910.106)			X
(c) Is each service station provided with at least one fire extinguisher having a minimum approved classification of 6 B, C, located so that the extinguisher is with 75 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service room? (1910.106)			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): Signs on paint storage container needs repainted. RAC 4

(2): Facility manager has intent to provide concrete pad through self-help. RAC 4

ACTIVITY/AREA: HOUSEKEEPING
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are all places of employment, passageways, storerooms, and rooms kept clean and orderly and in a sanitary condition? (1910.11)	X (1)		
2. Are aisles and passageways kept clean and unobstructed with no carpet snags, electrical cords, or telephone cords extending across walkways, creating slip, trip, and fall hazards? (1910.22)	X		
3. Have warning signs on buildings and other locations been kept in good condition and not allowed to deteriorated beyond recognition? (NFPA 30A)	X		
4. Are guards or handrails available for stairways having more than four risers? (1910.23)			X
5. Do the steps have a slip-resistant material that is functional? (1910.24)	X		
6. Has Preventive Medicine been contacted if any of the items listed below appear to exist? (AR 40-5) a. Inadequate lighting b. High mold content in the air c. Loud noises d. Inadequate ventilation			X
7. If personnel wear respirators for any jobs, is there a written Respiratory Protection Program and does it contain the following: a. Written standing operating procedures for proper selection, use and care of respirators? b. Are respirators/filters selected on the basis of employee hazards and does the equipment meet ANSI standards? c. Are employees trained in the proper use of respirators, and have they been medically qualified (pulmonary function test and fit tested by a qualified instructor)? d. Are respirators regularly cleaned and disinfected and stored in a convenient, clean, and sanitary location? e. Are respirators routinely inspected for worn or deteriorated parts? f. Do employees receive yearly pulmonary function and fit testing from a qualified instructor? (AR 385-10, 1910.34, and AR 11-34)	 X X X	X (2) X (4)	
8. Does the upstairs storage area have the maximum weight capacity sign posted? (l9l0.22)			X
9. Is warm water available in each lavatory? (l9l0.141)	X		
l0. Are the outlets for nonpotable water (e.g. industrial or fire fighting purposes) posted or otherwise marked in a manner that will clearly indicate the water is unsafe and not to be used for drinking or washing of the person? (1910.141)			X
11. Is hand soap or similar cleansing agents provided? Are individual hand towels or selections thereof, of cloth or paper, warm air blowers, or clean individual selections of continuous toweling provided? (1910.141)	X		
12. Are employees forbidden from consuming food or beverages in a toilet room or in any area exposed to toxic materials? (1910.141)	X		
13. Have all cracked windows /and or leaking roof(s) (if there were any) been fixed		X (3)	

so that no water is allowed into the building to create a slipping hazard? (I960.9)			
14. Are upstairs storage areas equipped with railings and toe boards? They must have railings on all sides except those with ladders/stairs, etc. (I9I0.23)			X
15. Is approved head protection provided, where necessary, to personnel for the protection of heads from impact and penetration from falling and flying objects and from limited electric shock and burns? (1910.135)	X		
16. Are covers and/or guardrails provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc? (1910.22)	X		
17. Is every stairway floor opening guarded by a standard railing on all exposed sides except at entrance to stairway? (STANDARD: A smooth-surfaced top rail throughout the length of the railing at a vertical height of 42 inches nominal from the upper surface of top rail to the floor, platform, runway, or ramp level; an intermediate rail approximately halfway between the top rail and the floor, platform, runway, or ramp, and posts.) (1910.23)			X
18. Is every floor hole into which persons can accidentally walk, guarded with a standard guard railing and with a standard toe board? (1910.23)			X
19. Do fixed stairways have a minimum width of 22 inches? And, are all treads reasonably slip-resistant and is the rise height and tread width uniform throughout any flight of stairs? (1910.24)			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): This facility is maintained in an extremely neat and clean condition.

(2): Recommend this be included in OMS SOP. RAC 5

(3): Water leak on floor in locker room latrine. Water leak around ceiling light fixture in Mess kitchen dishwasher area... water dripping on floor. Ridge vent leaks on main bldg., on work order. Glass in door on drill hall is cracked. RAC 3

(4): Have necessary personnel evaluated. RAC 2

ACTIVITY/AREA: LADDERS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. The maximum length for portable wood ladders shall be: step-ladders 20 feet; single straight ladders 30 feet; two section extension ladders 60 feet; sectional ladders 60 feet; trestle ladders 20 feet; platform step-ladders 20 feet; painter's step-ladders 12 feet; and mason's ladders 40 feet. (1910.25) Do the ladders in this facility meet these requirements?			X
2. The maximum length for portable metal ladders shall be: single straight ladders 30 feet; two section extension ladders 48 feet; over two section extension ladders 60 feet; step-ladders 20 feet; trestle ladders 20 feet; and platform step-ladders 20 feet. (1910.26) Do the metal ladders in this facility meet these requirements?			X
3. Step-ladders shall be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in a open position. (1910.25, 1910.26) Do the step-ladders in this facility meet these requirements?			X
4. Are ladders maintained in good condition, and defective ladders withdrawn from service? Are rungs free of grease and oil? (1910.25)			X
5. Are only portable ladders that have nonconductive siderails used when working with live electrical circuits? (1910.333)			X
6. Are all portable ladders placed to prevent slipping, or lashed or held in position? (1910.25)			X
7. Are all portable ladders equipped with non-slip bases when there is a hazard of slipping? (Note: Non-slip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used upon oily, metal, concrete, or slippery surfaces.) (1910.25)			X
8. Do the portable ladders used to gain access to a roof, extend at least 3 feet above the point of support, at eaves, gutter, or roof line? (1910.25)			X
9. Are ladder stands and work platforms capable of supporting at least four times the design work load? (1910.29)			X
10. Is the standard (work platform) (4 inch nominal) toe-board installed for work levels 10 feet or higher above the ground or floor? (1910.29)			X
11. For work levels (work platforms) 10 feet or higher above the ground or floor, is a guardrail of 2 x 4 inch nominal, or the equivalent, installed no less than 36 inches or more than 42 inches high (with a mid-rail when required)? (1910.29)			X

12. Are wheel/casters (work platforms) provided with a positive wheel and/or swivel lock to prevent movement? (1910.29)	X		
13. Are wooden ladders free of sharp edges and splinters? (1910.25)			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

ACTIVITY/AREA: MOTORPOOL AND MILITARY VEHICLE SAFETY
INSPECTOR:

Note: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are periodic shop maintenance inspections conducted by the Commander? (FM 43-5)	X		
2. Do supervisors conduct regular safety meetings in the work area? (FM 43-5)	X		
3. Does the unit have a shop safety SOP and does it contain job specific safety precautions and procedures? (FM 43-5)		X (1)	
4. Are maintenance areas kept clean and orderly? (1910.22, FM 43-5)	X		
5. Are oil spills cleaned up immediately? (1910.106, FM 43-5)	X		
6. Are tools properly maintained and replaced when worn, broken, or deteriorated? (1910.242, FM 43-5, and TM 9-243)	X		
7. In addition to job-by-job cleanup, is a scheduled period of 15-30 minutes each shift being utilized for housekeeping duties? (1910.22, FM 43-5)	X		
8. Are drip pans utilized in motor pool bays under vehicles which have seeps or leaks of petroleum, oil, and lubrication (POL) products? (1910.22)		X (2)	
9. Are vehicles that have fuel leaks taken from service until the leak is repaired? (AR 385-55)	X		
10. Is smoking prohibited within 50 feet of vehicles transporting or dispensing flammable liquids, explosives, or other combustible materials? (AR 385-55)	X		
11. Compressed air shall not be utilized for cleaning purposes, except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment. Is this rule being observed? (1910.242)	X		
12. Are military motor vehicles equipped with highway warning kits, which shall include operating procedures for the warning devices used on these vehicles? (AR 385-55)	X		
13. Do emergency response vehicles, vehicles with valuable equipment/explosives, or AMV personnel carriers with a capacity of five or more persons, carry a fire extinguisher? (DOT Reg 393-95, subpart H; AR 385-55)			X
14. Are chock blocks utilized when military vehicles are parked on inclines or whenever maintenance is performed? (AR 385-55)	X		
15. Are guides utilized when drivers back any type of vehicle, if rear visibility is blocked by cargo, or otherwise limited, or with drivers of buses with a capacity greater than 12, and of 2 1/2 ton or larger trucks? (AR 385-55)	X		
16. Are reel drop light cords replaced when they are cracked or damaged? (1910.304 and NEC 70)			X
17. Is a positive bonding connection made between gasoline tank trucks and the source vehicle/fuel container; and are POL trucks grounded before refueling? (AR 385-55)	X		
18. Are drivers performing documented, before, during, and after operation checks	X		

of their vehicles? (AR 385-55)			
19. Has electrical equipment (i.e. generators) grounding been accomplished and is there documentation of an initial ohms testing utilizing a multimeter (0-5 volt reading)? (TC 11-6, FM 10-69, and FM 10-68)			X
20. Purging of Vehicle Fuel Tanks (TB 43-0212) a. Personnel engaged in purging operations will not wear wool, nylon, silk, rayon or other similar clothing. They will wear cotton clothing, with no metal buttons, and rubber boots. Is this being adhered to? b. Is the tank statically grounded, prior to, and during all operations? c. Is a combustible vapor test reading being accomplished prior to purging the tank, utilizing an acceptable explosive meter? d. Is proper disposal of purging chemicals being accomplished?			X
21. Are all flammable waste materials removed to a collection area outside motor shops and garages at the close of each workday? (AR 385-55)	X		
22. Is the use of gasoline prohibited for any cleaning purposes including cleaning vehicle parts, clothing, floors, etc? (AR 385-55)	X		
23. Are special activities such as painting, welding, and battery work, confined to separate parts of the garage or maintenance areas and isolated from each other?	X		
24. Is adequate ventilation provided in the motorpool to prevent accumulation of flammable or injurious vapors and gases?	X		
25. Are floors kept clean and free of oil, grease, gasoline, water, and other hazardous or slippery substances?	X		
26. Do personnel performing hazardous operations have proper personal protective equipment?	X		
27. Are portable guardrails placed around grease or repair pits when not in use?			X
28. Are lifts provided with stop-checks to prevent movement of the vehicle when the lift is in the raised position?	X		
29. Are personnel prohibited from remaining in vehicle when vehicle is on the lift?	X		
30. Are vehicles supported securely in position on safety stands after being raised by jacks?	X		
31. Are jacks labeled with their load limit and inspection due date?	X		
32. Are tools in good working condition?	X		
33. Are gas tanks and other fuel containers removed from vehicles, drained, steamed, and filled with water before welding or other heat-producing operations are performed?			X
34. Are horn warning or other prescribed signals given by vehicles when entering or leaving the shop?	X		
35. Are the safe load limits for cranes and derricks in both maximum and minimum positions clearly indicated?	X		
36. Are cranes and derricks equipped with braking devices, capable of stopping at least one and one-half times the rated load?	X		

37. Are cables or wire ropes free from broken strands, corrosion and other defects?	X		
38. Are electrical lightbulbs attached to extension cords provided with wire guards?	X		
39. Are electrical wiring and fixtures installed in grease and repair pits explosion proof?			X
40. Are low voltage lights used in pits? (less than 24V)			X
41. Are steps in pits painted yellow to indicate caution?			X
42. Are fire extinguishers suitable for class B fires distributed and maintained throughout the vehicle parking areas and shops?	X		
43. Are personnel trained as to their individual responsibilities to follow all safety instructions and to use all safeguards incident to the use the tools, machinery, equipment, and processes?	X		
44. Are current maintenance and equipment publications accessible to equipment operators, mechanics, and leaders?	X		

MATERIAL HANDLING AND STORAGE

1. Are only trained and authorized personnel permitted to operate powered industrial trucks? (1910.178)			X
2. Are overhead guards installed on all powered industrial trucks? (1910.178)			X
3. Are load backrest extensions used whenever necessary to minimize the possibility of the load or part of it from falling rearward? (1910.178)			X
4. Are powered industrial trucks in need of repair, defective, or in any way unsafe taken out of service until they are restored to a safe operating condition? (1910.178)			X
5. Where mechanical handling equipment is used, are sufficient safe clearances allowed for aisles, through doorways, and wherever turns or passage must be made? (1910.176)			X
6. Are aisles and passageways kept clear and in good repair, with no obstructions across or in aisles that could create a hazard? (1910.176)			X
7. Are permanent aisles and passageways appropriately marked? (1910.176)			X
8. Is material stored so as not to create a hazard? (1910.176)			X
9. Are clearance signs to warn of clearance limits provided? (1910.176)			X

OVERHEAD AND GANTRY CRANES

1. Are only designated personnel permitted to operate the crane? (1910.179)	X		
2. Are crane hooks removed from service when throat openings exceed more than 15 percent of normal or hook shows more than a 10 degree twist from the plane of the unbent hook or shows signs of cracks? (1910.179)	X		
3. Do hooks have safety closure latches properly positioned and functional? (TB 43-0142)	X		
4. Are hoists, chains, slings and hooks marked to indicate the item identification		X(3)	

number, load rating and next periodic inspection date? (TB 43-0142)			
5. Has a thorough inspection of all ropes (wire ropes) been made at least once a month and a certification record maintained on file? (1910.179)		X(3)	
6. Are lifts/hoist that have an hydraulic fluid leak repaired and or replaced, depending upon the problem? (TB 43-0142)			X(4)
7. Do personnel use standard hand signals to communicate with the crane operator?			X (5)
8. Are employees aware of the weight of the load to be lifted?	X		
9. Is the hoist chain or rope free from kinks, twists, and NOT wrapped around the load?	X		
10. Is hoisting, lowering, swinging, or traveling forbidden while on the load or hook?	X		
11. Are loads prohibited over the heads of people?	X		
12. Does the operator test the brakes each time a near-capacity load is handled?	X		
13. Does the operator stay in position at the controls while the load is suspended?	X		
14. When the hook is in the extreme low position, is there at least two complete wraps of rope remaining on the drum?	X		
15. Are rope ends securely attached to the drum by means of a clamp or socket arrangement approved by the crane or rope manufacturer?	X		
16. Is the hook centered over the load to prevent swinging?	X		
17. Has the crane been load tested?	X		

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): Needs written SOP. RAC 5

(2): Needs drip pans. RAC 4

(3): This is new equipment, was load tested resulting in a lower rating than manufacturer 's markings. It is very important that appropriate tags be affixed to announce this condition. RAC 3

(4): Electric powered crane.

(5): Operator is in direct contol of hand controller.

ACTIVITY/AREA: WELDING OPERATIONS
INSPECTOR:

Note: All "NO" answers require a comment at the end of the checklist for the area.

ITEM	YES	NO	NA
1. Are only qualified and authorized personnel permitted to perform welding operations? (1910.252)			X (1)
2. Are personal protective equipment, such as helmets, eye protection shields, goggles, aprons, respirators and gloves provided? (1910.132)			X (1)
3. Is an exhaust system provided whenever natural ventilation is inadequate to remove injurious fumes and gases? (1910.252)			X (1)
4. Have flammable or explosive materials been removed or confined to eliminate the possibility of fire or explosion during welding work? (1910.252)			X (1)
5. Are written SOPs governing the selection and proper use of respirators available? (1910.134)			X (1)
6. Do welding or cutting goggles, helmets and face shields employ the correct filtered lens (shade number) for the welding operation (i.e. soldering-Shade 2; light cutting-Shade 3/4; heavy cutting-Shade 5/6)? (1910.252)	X		
7. Are respirators assigned to individual workers for their exclusive use? (1910.134, TB Med 502)			X (1)
8. Are respirators thoroughly cleaned and disinfected after each use? (1910.134, TB Med 502)			X (1)
9. Are personnel who use respirators given a physical examination to determine if they are physically able to perform the work and use this equipment? (1910.134)			X(1)
10. Are fire curtains provided and set up around welding operations to protect property and operators of nearby equipment? (1910.252)			X (1)
11. Are acetylene gas cylinders stored away from heat source stored in an upright position, and chained or secured to prevent falling? (AR 700-68, I9I0.252)		X (2)	
12. Is acetylene gas used at a pressure not to exceed 15 pounds per square inch (PSI) (higher pressure may cause it to explode)? (AR 700-68, 1910.252)	X		
13. When oxy-acetylene welding is done using a welding rig,: Have the guages been calibrated? Do the hoses have flashback arresters? Are the hoses in good repair? Are the bottles firmly affixed to the cart? (1910.253)	X X	X (3)	
14. Are Material Safety Data Sheets (MSDS) provided for welding rods and other types of chemicals (hazardous by-products) utilized during welding? (1910.1200)			X (1)
15. Are suitable fire extinguishing equipment (e.g. pails of water, buckets of sand, hose or portable extinguishers), available? (1910.252)	X		
16. Is the frame or case of the welding machine (except engine driven machines) grounded? (1910.252)			X

17. Are welders included in the unit's medical surveillance program? (AR 40-5)			X

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

NOTE (1): No welding is performed at this facility. Oxy-acetylene torches are used only for cutting and heating.

(2): One oxygen cylinder in OMS is not secured. RAC 3

(3): OMS has arresters ... need to be installed. RAC 3

ENCLOSURE 1
RPMA PROJECT DOCUMENTATION

RPMA PROJECT

INSTALLATION: SFC MINORU KUNIEDA USARC

PROJECT NUMBER: MOTOR PARK

PROJECT NAME: Motor Park Repair

PROJECT DESCRIPTION: Overlay the existing area with the proper drainage and construct additional parking for 30 vehicles and equipment in the company motor pool. The completed project should have appropriate lighting, drainage, fencing to cover 3 acres site. The site appropriate for this motor park need a storage and secondary containment for the above ground fuel tanks.

DESCRIPTION OF CURRENT CONDITIONS: The unit motor park consists of an asphalt pavement which will continue to deteriorate. The area has been scheduled to demolish the old washrack and to remove the concrete grease rack. The overlay project should be scheduled upon completion of the removal of these two obsolete structure.

JUSTIFICATION: (Include impact if the project is not accomplished and when the project should be executed.)
The two concrete structures are scheduled to be removed in the near future. The center parking is now very limited. The overlay will allow to expand the parking by approximately 30 parking spaces.

SKETCHES: See report

PHOTOS: See Section 4.A

FIELD NOTES: None

COST ESTIMATE: (SEE ATTACHED FORM)

COPY OF DA FORM 4283: Attached

					INITIATED
				YR	MO DA
Requestor	MOTOR PARK REPAIR			9 6	0 3 2 0
CODE					

M B

		PHONE NUMBER
KUNIEDA USARC	CPT TAKISHITA	8 0 8 - 9 3 5 - 9 2 8 8

DESCRIPTION OF REQUIREMENT

Overlay the existing area with the proper drainage and construct additional parking for 30 vehicles and equipment in the company motor pool. The completed project should have appropriate lighting, drainage, fencing to cover 3 acre site. The site appropriate for this motor park need a storage and secondary containment for the above ground fuel tanks.

The two concrete structures are scheduled to be removed in the near future. The center parking is now very limited. The project will allow to expand the parking by approximately 30 parking spaces.

AUTHORIZED [illegible] SIGNATURE

PART 3			DATE		
			YR	MO	DA
To be completed by Regional Engineer Approving Official Only	APPROVAL ACTION CODE	PROJECT PRIORITY CODE			
	REQUIREMENT TYPE	SPECIAL INTEREST CODE			
	APPROPRIATION	DATE APPROVAL			

REMARKS:

ENVIRONMENTAL IMPACT			WORK ACCOMPLISHED	WORK PLANNED	ESTIMATED COSTS		SOURCE OF FUNDS
YES	NO				Funded	Unfunded	
—	—	ENVIRONMENTAL	— DPW				— DIRECT
—	—	CONSIDERATION	— HELP/HELP				— AUTOMATIC REIMBURSEMENT
—	—	EIS/EIA	— CONTRACT				— FUNDED REIMBURSEMENT
		INITIATED	— TROOP				
—	—	EIS/EIA	— OTHER				
		COMPLETED	—				OTHER FUND CITATION
			COMMENTS:				

APPROVAL FOR ORIGIN	YR	MO	DA	APPROVAL FOR ACTION		DATE YR	MO	DA
Please type or print name:				Please type or print name:	— APPROVED			
Signature:				Signature:	— DISAPPROVED			

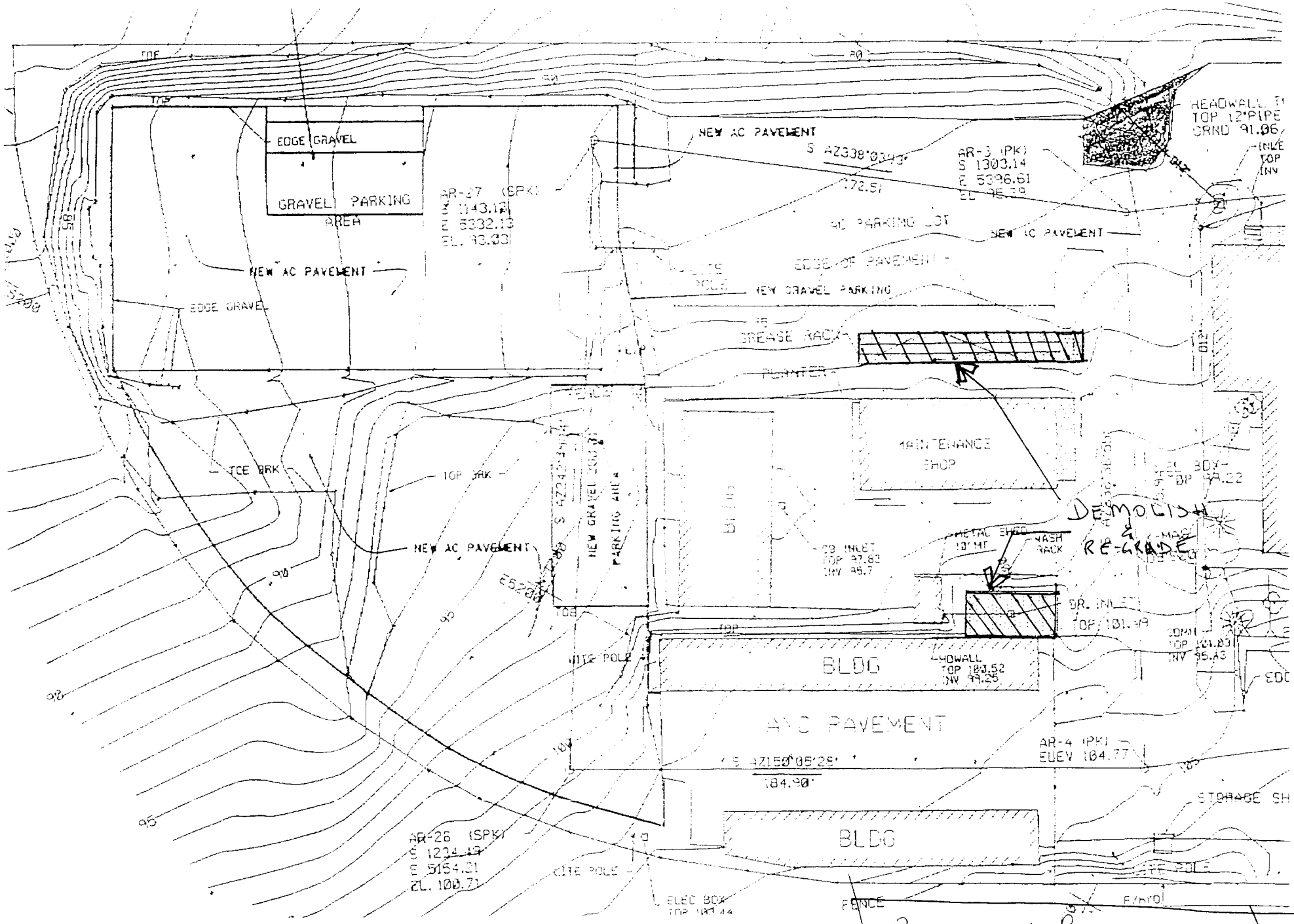
USARC FORM 4283

UNITED STATES ARMY
416th ENCOM, ESG-W
Post Office Box 400
Mountain View, CA 93540
(415) 603-8658

CONSTRUCTION COST ESTIMATE

Work description: OVERLAY EXISTING MEP AREA W/DRAINAGE AND CONSTRUCT ADDITIONAL PARKING FOR 30 VEHICLES FOR KUNIEDA USARC, HILO HI.

ITEM	QUANTITY	UNIT PRICE	COST
DEMOLITION WASH RACK	1	3,600	$3,000
" GREASE RACK	1	5,800	5,800
GRADE the two AREAS	2	400	800
RE-PAVE AREAS	2	2,000	4,000
OVERLAY Lot w/ ½" AC	~~$~~20,000	$3/~~$~~	60,000
STRIPE PARKING	1	300	300
SUB-TOTAL			$73,900
Contingency +15%			11,085
Design Cost +12%			8,868
Construction Engineering Cost +15%			11,085
TOTAL			$104,938



04/11/95 09:55 ☎408 945 8991 DESIGN DIVISION 002

RPMA PROJECT

INSTALLATION: SFC MINORU KUNIEDA USARC

PROJECT NUMBER:

PROJECT NAME: Roof Repairs in the Assembly Building

PROJECT DESCRIPTION:

Repair roofs leaks located in the Assembly Hall. The metal roof leaks constantly. The building needs an entire overall of the metal roof. The leaks' causes damage to the building interior.

DESCRIPTION OF CURRENT CONDITIONS: The building has several leaks which are damaging the interior of the Assembly Hall.

JUSTIFICATION: (Include impact if the project is not accomplished and when the project should be executed.)

If not repaired leaks are expected to worsen, causing further damage to equipment, and ceiling.

SKETCHES: See report

PHOTOS: See Section 5.A

FIELD NOTES: None

COST ESTIMATE: (SEE ATTACHED FORM)

COPY OF DA FORM 4283: Attached

Completed by requestor	REQUESTOR CODE	REQUEST NUMBER	DESCRIPTION OF REQUIREMENT	INITIATED YR	MO	DA
			ROOF REPAIRS IN THE ASSEMBLY BUILDING	9 6	0 3	2 0

FACILITY CODE: M B

FACILITY NAME	POC NAME	POC PHONE NUMBER
KUNIEDA USARC	CPT TAKISHITA	808 - 935 - 9288

DESCRIPTION OF REQUIREMENT:

Repair roof leaks located in the Assembly Hall. The metal roof leaks constantly. The building needs an entire overall of the metal roof. The leaks' causes damage to the building interior.

WHAT WILL HAPPEN IF NOT REPAIRED:

If not repaired, leaks are expected to worsen, causing further damage to equipment and ceiling.

AUTHORIZED REQUESTOR: Type or Print | Phone | SIGNATURE

PART B (To be completed by Regional Engineer Approving Official Only)

APPROVAL ACTION CODE: ____ | PROGRAM INDICATOR CODE: ____

REQUIREMENT TYPE: ____ | SPECIAL INTEREST CODE: ____

APPROPRIATION: ____ | DATE OF APPROVAL: YR ___ MO ___ DA ___

REMARKS:

ENVIRONMENTAL IMPACT	YES	NO	WORK TO BE PERFORMED	WORK CLASS/AMSCO	ESTIMATED COSTS Funded	Unfunded	SOURCE OF FUNDS
ENVIRONMENTAL CONSIDERATION	☐	☐	☐ OPW		$	$	☐ DIRECT
EIS/EIA INITIATED	☐	☐	☐ SELF HELP		$	$	☐ AUTOMATIC REIMBURSEMENT
EIS/EIA COMPLETED	☐	☐	☐ CONTRACT		$	$	☐ FUNDED REIMBURSEMENT
			☐ TROOP		$	$	
			☐ OTHER		$	$	
			COMMENTS:	Total:	$	$	OTHER FUND CITATION

APPROVAL FOR DESIGN	DATE YR	MO	DA	PROJECT APPROVAL AUTHORITY	APPROVAL ACTION	DATE YR	MO	DA
(Please type or print name)				(Please type or print name)	☐ APPROVED			
(Signature)				(Signature)	☐ DISAPPROVED			

USARC FORM 4283

UNITED STATES ARMY
416th ENCOM, ESG-W
Post Office Box 400
Mountain View, CA 93540
(415) 603-8658

CONSTRUCTION COST ESTIMATE

Work description: REPLACE THE ROOF TO THE ASSEMBLY HALL AT KUNIEDA USARC, HILO HI

ITEM	QUANTITY	UNIT PRICE	COST
PREP- ROOF ASSEMBLY HALL	1	3,000	3,000
RE-ROOF " "	~~1~~ 6,000	$4/~~1~~	24,000
SUB-TOTAL			$27,000
Contingency 15%			4,050
Design Cost + 15%			4,050
Construction Engineering Cost + 12%			3,240
TOTAL			38,340

RPMA PROJECT

INSTALLATION: SFC MINORU KUNIEDA USARC

PROJECT NUMBER:

PROJECT NAME: Exterior Building Repairs

PROJECT DESCRIPTION:

The exterior of the buildings has been scheduled for removing the paint that is flaking and repaint the structures. A lab analysis report analyzed the paint chips for total percent lead. The report shows a percent of lead from as high as 8 %. This percent of lead is above the safe levels to protect the human health and the environment.

DESCRIPTION OF CURRENT CONDITIONS: The exterior paint is chipping causing lead to be introduced in the environment above minimum reporting limit established by Federal EPA.

JUSTIFICATION: (Include impact if the project is not accomplished and when the project should be executed.)

The existing condition is not corrected then the contamination of the lead paint may cause a health hazard to the workers and the environment. Levels of the paint chip by percent are high enough that an IH review the data so that appropriate safety measures can be implemented.

SKETCHES: See report

PHOTOS: See Section 5.A

FIELD NOTES: None

COST ESTIMATE: (SEE ATTACHED FORM)

COPY OF DA FORM 4283: Attached

SAR FACILITIES SUPPORT REQUEST

PART A (To be completed by requestor)	REQUESTOR ID CODE	REQUEST SERIAL NUMBER	TYPE	DESCRIPTION OF REQUIREMENT (PRINT)	INITIATED YR	MO	DA
				EXTERIOR BUILDING REPAIRS	96	03	20

FACILITY ID CODE	REQUESTOR REFERENCE NUMBER
MB	

FACILITY NAME	POC NAME	POC PHONE NUMBER
KUNIEDA USARC	CPT TAKISHITA	808-935-9288

DESCRIPTION OF REQUIREMENT:

The exterior of the building has been scheduled for removing the paint that is flaking and repaint the structure. A lab analysis report analyzed the paint chips for total percent lead. The report shows a percent of lead from as high as 8%. This percent of lead is above the safe levels to protect the human health and the environment.

JUSTIFICATION FOR REQUIREMENT:

The existing condition is not corrected then the contamination of lead paint may cause a health hazard to the workers and the environment. Leavels of the paint chip by percent are high enough that an I H review the data so that appropriate safety measures can be implimented.

AUTHORIZED REQUESTOR: (Type or Print) _____ Phone _____ SIGNATURE _____

PART B (To be completed by Regional Engineer Approving Official Only)			DATE YR	MO	DA
	APPROVAL ACTION CODE:	PROGRAM INDICATOR CODE:			
	REQUIREMENT TYPE:	SPECIAL INTEREST CODE:			
	APPROPRIATION:	DATE OF APPROVAL:			

REMARKS:

ENVIRONMENTAL IMPACT YES	NO		WORK TO BE PERFORMED	WORK CLASS (AMSCO)	ESTIMATED COSTS Funded	Unfunded	SOURCE OF FUNDS
		ENVIRONMENTAL CONSIDERATION	DPW		$	$	DIRECT
		EIS/EIA INITIATED	SELF HELP		$	$	AUTOMATIC REIMBURSEMENT
		EIS/EIA COMPLETED	CONTRACT		$	$	FUNDED REIMBURSEMENT
			TROOP		$	$	
			OTHER		$	$	OTHER FUND CITATION
			COMMENTS:	Total:	$	$	

APPROVAL FOR DESIGN	DATE YR	MO	DA	PROJECT APPROVAL AUTHORITY	APPROVAL ACTION	DATE YR	MO	DA
(Please type or print name)				(Please type or print name)	APPROVED			
(Signature)				(Signature)	DISAPPROVED			

USARC FORM 4283

UNITED STATES ARMY
416th ENCOM, ESG-W
Post Office Box 400
Mountain View, CA 93540
(415) 603-8658

CONSTRUCTION COST ESTIMATE

Work description: Exterior Building Repairs for removing flaking paint. at Kunieda USARC, Hilo HI

ITEM	QUANTITY	UNIT PRICE	COST
Remove Rust & Chipping			
Paint Using Approved EPA			
method for Lead paint abetament			
(± 7225 ☐)	7225 ☐	$.60/☐	4,335
Prime & Paint Exterior	22,000 ☐	$1.3/☐	28,600
SUB-TOTAL			$32,935
Contingency			
Design Cost			
Construction Engineering Cost			
TOTAL			

PMA PROJECT

INSTALLATION: SFC MINORU KUNIEDA USARC

PROJECT NUMBER:

PROJECT NAME: NPDES Surface Discharge Permit Compliance

PROJECT DESCRIPTION:

The existing drainage collection system from the USAR MEP area is discharged into a nearby creek. Detection levels under the NPDES show low level of Total Petroleum Hydrocarbons in the effluent from the site. To mitigate future liability the storm runoff should be routed through a oil water separator now being installed for a new
washrack constructed on the west side of the center.

DESCRIPTION OF CURRENT CONDITIONS: The storm runoff goes directly into the nearby creek.

JUSTIFICATION: (Include impact if the project is not accomplished and when the project should be executed.)

The existing NPDES Permit for this site call for periodic samples from the effluent surface discharge. The analysis show elevated levels of TPH in the effluent to the site. The liability for discharge of low level pollutants can be considerably reduced if the storm runoff is piped through the nearby oil water separator being constructed for the washrack.

SKETCHES: See report

PHOTOS: See Section 5.A

FIELD NOTES: None

COST ESTIMATE: (SEE ATTACHED FORM)

COPY OF DA FORM 4283: Attached

SURFACE DISCHARGE PERMIT COMPLIANCE

9 6 0 3 2 0

M B

KUNIEDA USARC

CPT TAKISHITA

8 0 8 - 9 3 5 - 9 2 8 8

The existing drainage collection system from the USAR MEP area is discharged into a nearby creek. Detection levels under the NPDES show low level of Total Petroleum Hydrocarbons in the effluent from the site. To mitigate future liability the storm runoff should be routed through an oil water separator now being installed for a new washrack constructed on the west side of the center.

The existing NPDES Permit for this site call for periodic samples from the effluent surface discharge. The analysis show elevated levels of TPH in the effluent to the site. The liability for discharge of low level pollutants can be considerably reduced if the storm runoff is piped through the the nearby oil water separator being constructed for the washrack.

AUTHORIZED REPRESENTATIVE — DATE — SIGNATURE

PART B

To be completed by Regional Engineer Approving Official Only

APPROVAL ACTION CODE

REQUIREMENT TYPE

APPROPRIATION

PROGRAM INDICATOR CODE

SPECIAL INTEREST CODE

DATE OF APPROVAL

DATE: YR MO DA

REMARKS

ENVIRONMENTAL IMPACT

- ENVIRONMENTAL CONSIDERATION
- EIS/EIA INITIATED
- EIS/EIA COMPLETED

WORK TO BE PERFORMED

- DPW
- SELF-HELP
- CONTRACT
- TROOP
- OTHER

COMMENTS:

WORK CLASSIFICATION — ESTIMATED COSTS — Funded — Unfunded

Total

SOURCE OF FUNDS

- DIRECT
- AUTOMATIC REIMBURSEMENT
- FUNDED REIMBURSEMENT

OTHER FUND CITATION

MANAGER FOR DECISION — DATE — YR MO DA

Please type or print name:

Signature:

PROJECT MANAGER ACTION

Please type or print name:

Signature:

APPROVAL ACTION

- APPROVED
- DISAPPROVED

DATE — YR MO DA

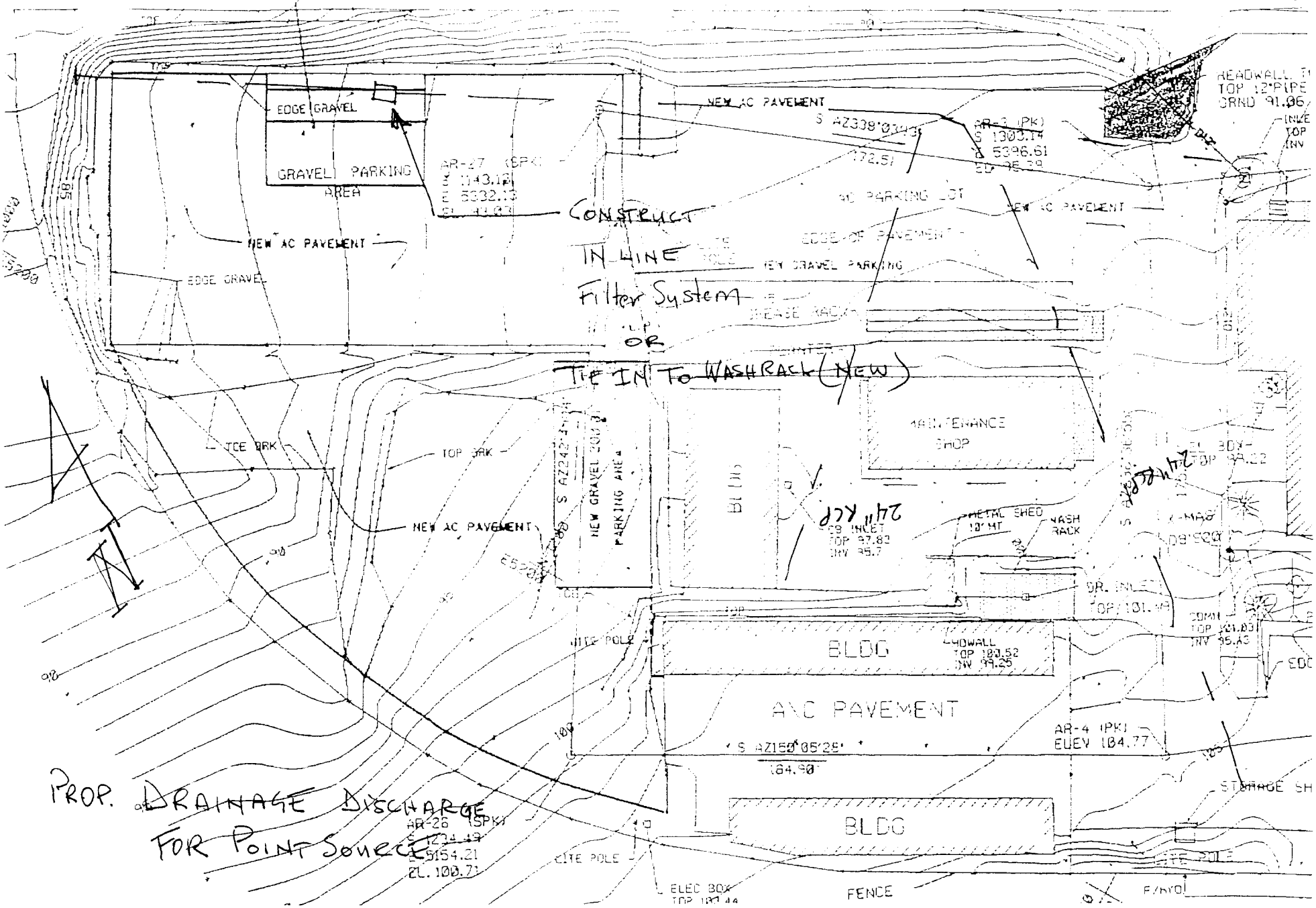
USARC FORM 4283

UNITED STATES ARMY
416th ENCOM, ESG-W
Post Office Box 400
Mountain View, CA 93540
(415) 603-8658

CONSTRUCTION COST ESTIMATE

Work description: CONSTRUCT NEW DRAINAGE WITH IN LINE FILTER FOR POINT DISCHARGE OF SURFACE RUNOFF AT MEP AREA KUNIEDA USARC

ITEM	QUANTITY	UNIT PRICE	COST
REMOVE EXIST. ASPHALT	300CY	$30/CY	9,000
PAVING to tie in Line	120 LF	$3/LF	360
INSTALL AN IN-LINE Filter	1	15,000	15,000
SUB-TOTAL			$24,360
Contingency 15%			3,654
Design Cost + 12%			3,000
Construction Engineering Cost + 15%			3,654
TOTAL			34,668



KUNIEDA USARC

HILO, HI

HILO, HAWAII

LAB ANALYSIS

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

12 Feb 94

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00286	B2 FOOD STORAGE WALL 1515A	0.101
94-00287	B2 SUPPLY OFFICE WALL 1515	0.007
94-00288	B2 SCULLERY WALL 1523	<0.005
94-00289	B2 SUPPLY OFFICE WALL 1530	0.008
94-00290	B2 FOOD STORAGE DOOR JAMB 1531	0.080
94-00291	B2 SCULLERY WALL 1540	0.005
94-00292	B2 LOCKER ROOM BEAM 1550	0.53
94-00293	B2 LOCKER ROOM HEAD 1557	<0.005
94-00294	B2 LOCKER ROOM WALL 1600	0.043
94-00295	B2 LOCKER ROOM SHOWER 1605	<0.005
94-00296	B2 LOCKER ROOM WINDOW 1609	0.022
94-00297	B2 JAN. ROOM WALL 1615	<0.005
94-00298	B2 LOCKER ROOM STALL 1617	0.006
94-00299	BLDG 2-14	<0.005
94-00300	BLDG 2-15	<0.005
94-00301	BLDG 2-16	0.006
94-00302	BLDG 2-17	0.021
94-00303	BLDG 2-18	0.067
94-00304	BLDG 2-19	0.038
94-00305	TOOL SHED - ROOF A	0.045
94-00306	TOOL SHED - ROOF B	0.013
94-00307	TOOL SHED - ROOF C	0.010
94-00308	TOOL SHED - ROOF D	0.013
94-00309	SHED - O	0.441
94-00310	SHED - P	0.363
94-00311	SHED - Q	0.097

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00312	DINING HALL (ROOF) - A	<0.005
94-00313	DINING HALL (ROOF) - B	0.052
94-00314	DINING HALL (ROOF) - C	0.062
94-00315	DINING HALL (ROOF) - D	0.071
94-00316	DINING HALL (ROOF) - E	0.022
94-00317	DINING HALL (ROOF) - F	0.070
94-00318	DINING HALL (ROOF) - G	0.005
94-00319	DINING HALL (ROOF) - H	<0.005
94-00320	DINING HALL (ROOF) - I	0.021
94-00321	DINING HALL (ROOF) - J	0.015
94-00322	B2 ASSEMBLY HALL - WALL 0926	<0.005
94-00323	B2 ASSEMBLY HALL - WALL 0928	<0.005
94-00324	B2 ASSEMBLY HALL - STEEL BEAM 0930	0.120
94-00325	B2 ASSEMBLY HALL - WINDOW 0932	0.015
94-00326	B2 ASSEMBLY HALL - DOOR 0944	<0.005
94-00327	B2 MAINT ROOM - DOOR FR. 0947	0.079
94-00328	B2 MAINT ROOM - DOOR 1000	0.097
94-00329	B2 MAINT ROOM - WALL 1002	0.027
94-00330	B2 MAINT ROOM - WALL 1004	<0.005
94-00331	B2 FOOD PREP - WALL 1431	0.005
94-00332	B2 FOOD PREP - WALL 1433	0.006
94-00333	B2 HEATER ROOM - WALL 1500	<0.005
94-00334	B2 FOOD STORAGE - WALL 1503	<0.005
94-00335	B2 HEATER ROOM PIPE 1513	<0.005
94-00336	RM 4-5	2.5
94-00337	RM 4-6	3.4

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

12 Feb 94

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00338	RM 4-7	0.049
94-00339	RM 4-12	0.045
94-00340	RM 4-9	4.3
94-00341	RM 4-8	0.041
94-00342	RM 4-11	0.053
94-00343	RM 4-13	0.456
94-00344	RM 4-14	0.48
94-00345	RM 4-15	5.4
94-00346	RM 4-16	3.2
94-00347	RM 4-17	0.313
94-00348	SHED - A	<0.005
94-00349	SHED - B	0.021
94-00350	SHED - C	0.009
94-00351	SHED - D	0.007
94-00352	SHED - E	3.2
94-00353	SHED - F	0.098
94-00354	SHED - G	0.008
94-00355	SHED - H	0.024
94-00356	SHED - I	7.3
94-00357	SHED - J	0.008
94-00358	SHED - K	2.6
94-00359	SHED - L	7.1
94-00360	SHED - M	7.8
94-00361	SHED - N	0.015
94-00362	ORMA - 18	0.182
94-00363	ORMA - 22	3.1

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00364	RM 1-3	0.047
94-00365	RM 1-4	<0.005
94-00366	RM 1-1	0.054
94-00367	RM 1-2	0.059
94-00368	RM 1-4B	0.029
94-00369	RM 1-5	0.368
94-00370	RM 2-5	0.005
94-00371	RM 2-3	0.037
94-00372	RM 2-4	0.016
94-00373	RM 2-6	0.061
94-00374	RM 2-2	0.007
94-00375	BLDG 2-1	0.033
94-00376	BLDG 2-2	4.4
94-00377	BLDG 2-3	0.024
94-00378	BLDG 2-4	0.033
94-00379	BLDG 2-5	0.445
94-00380	BLDG 2-6	0.093
94-00381	BLDG 2-7	<0.005
94-00382	BLDG 2-8	0.006
94-00383	BLDG 2-9	0.078
94-00384	BLDG 2-10	0.036
94-00385	BLDG 2-11	0.010
94-00386	BLDG 2-12	0.007
94-00387	BLDG 2-13	<0.005
94-00388	ORM 1-6	0.008
94-00389	ORM 1-7	<0.005

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00390	ORM 2-1	<0.005
94-00391	ORM 1-8	0.006
94-00392	ORM 2-7	0.005
94-00393	ORM 4-1	<0.005
94-00394	ORM 4-2	0.254
94-00395	ORM 2-8	<0.005
94-00396	ORM 4-3	2.1
94-00397	ORM 4-4	2.7
94-00398	ORM 4-10	2.5
94-00399	ORM 4-21	<0.005
94-00400	ORM 4-19	0.048
94-00401	ORM 4-20	<0.005
94-00403	B1 WALL INDOOR - 15	<0.005
94-00404	B1 WALL INDOOR - 16	<0.005
94-00405	B1 WALL INDOOR - 17	<0.005
94-00406	B1 WALL INDOOR - 18	0.005
94-00407	B1 WALL INDOOR - 19	<0.005
94-00408	B1 WINDOW - 20	0.006
94-00409	B1 WALL INDOOR - 21	<0.005
94-00410	B1 WINDOW INDOOR - 22	0.007
94-00411	B1 WALL INDOOR - 23	<0.005
94-00412	B1 WALL INDOOR - 24	0.006
94-00413	B1 WALL INDOOR - 25	0.017
94-00414	B1 WALL INDOOR - 26	0.186
94-00415	B1 WALL INDOOR - 27	0.074
94-00416	B1 WALL INDOOR - 28	<0.005
94-00417	B1 WALL OUTSIDE - 1	0.011

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00417	B1 WALL OUTSIDE - 1	0.011
94-00418	B1 PIPE OUTSIDE - 2	0.013
94-00419	B1 DOOR OUTSIDE - 3	<0.005
94-00420	B1 DOOR JAMB OUTSIDE - 4	0.040
94-00421	B1 SCREEN OUTSIDE - 5	0.005
94-00422	B1 DOOR OUTSIDE - 6	0.013
94-00423	B1 RAILING OUTSIDE - 7	2.3
94-00424	B1 WALL OUTSIDE - 8	0.008
94-00425	B1 WALL OUTSIDE - 9	0.048
94-00426	B1 WALL OUTSIDE - 10	<0.005
94-00427	B1 TRIANGLE ALARM - 11	[illegible]
94-00428	B1 WINDOW OUTSIDE - 12	0.75
94-00429	B1 DOOR INSIDE - 13	0.025
94-00430	B1 DOOR JAMB INDOOR - 14	0.038
94-00431	B1 WALL INDOOR - 43	0.024
94-00432	B1 WALL INDOOR - 44	0.041
94-00433	B1 WALL INDOOR - 45	0.058
94-00434	B1 WALL INDOOR - A	<0.005
94-00435	B1 WALL INDOOR - B	<0.005
94-00436	B1 WALL INDOOR - C	<0.005
94-00437	B1 PARKING STALL FIRST LINE	0.098
94-00438	B1 WALL INDOOR 29	0.123
94-00439	B1 WALL INDOOR 30	0.071
94-00440	B1 WALL INDOOR 31	0.072
94-00441	B1 WALL INDOOR 32	0.076

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

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PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

12 Feb 94

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00442	B1 WALL INDOOR 33	0.206
94-00443	B1 WALL INDOOR 34	0.223
94-00444	B1 WALL INDOOR 35	0.124
94-00445	B1 WALL INDOOR 36	0.077
94-00446	B1 WALL INDOOR 37	0.035
94-00447	B1 WALL INDOOR 38	0.052
94-00448	B1 STALL INDOOR 39	0.338
94-00449	B1 DOOR INDOOR 40	0.253
94-00450	B1 WALL INDOOR 41	2.5
94-00451	B1 WALL INDOOR 42	0.012

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

RPMA PROJECT

INSTALLATION: SFC MINORU KUNIEDA USARC

PROJECT NUMBER:

PROJECT NAME: Replacement Air Conditioner (Classrooms)

PROJECT DESCRIPTION:

The existing cooling system for the center is continuously breaking down. The cooling coils, and the condenser of existing General Electric 7.5 ton air conditioner system as several leaks. The pans have rusted out and the utility room water builds up on the floor causing a slip hazard. The AC system services both classrooms which are used by the unit and a variety of community groups.

DESCRIPTION OF CURRENT CONDITIONS: The classrooms are subject to lose the air conditioning.

JUSTIFICATION: (Include impact if the project is not accomplished and when the project should be executed.)

The existing unit causes flooding in the utility room, electrical panels are located in the utility room. This could create an electrical hazard if someone tries to shot off a switch. The AC system outer pans are rusted through due to the amount of condensation from the system.

SKETCHES: See report

PHOTOS: See Section 5

FIELD NOTES: None

COST ESTIMATE: (SEE ATTACHED FORM)

COPY OF DA FORM 4283: Attached

REPLACEMENT AIR CONDITIONER CLASSROOMS

CPT TAKISHITA

[illegible] USAR

[illegible] replacement of either cooling coil and condensor [illegible] existing General Electric 7.5 Ton air conditioner [illegible] entire unit. Approximate cost of replacement items is [illegible]. Existing AC unit is in utility room and [illegible] two classrooms (admin bldg). Options for [illegible] include [illegible] wall mounted 1.5 Ton units. [illegible] units [illegible] - $1,000.00.

JUSTIFICATION FOR REQUIREMENT

Use of existing unit causes flooding in utility room that water builds up in rusted [illegible] operation. Classrooms are currently used [illegible] community groups, education classes, and other government agencies.

PART II

[illegible] completed by Regional Engineer [illegible]

APPROVAL ACTION CODE

REQUIREMENT TYPE

[illegible]

PROGRAM INDICATOR CODE

SPECIAL INTEREST CODE

DATE OF APPROVAL

DATE

[illegible]

[illegible]

ENGINEERING

[illegible]

DISA

INITIATED

DISA

COMPLETED

[illegible]

DPW

SELF HELP

CONTRACT

TROOP

OTHER

COMMENTS

WORK CLASSIFICATION	Funded	Unfunded
	$	$
	$	$
	$	$
	$	$
Total	$	$

DIRECT

[illegible]

REIMBURSEMENT

FUNDED

REIMBURSEMENT

OTHER [illegible]

[illegible]

DATE

[illegible]

Please type or print name

Signature

PROJECT APPROVAL AUTHORITY

APPROVED

DISAPPROVED

Please type or print name

Signature

UNITED STATES ARMY
416th ENCOM, ESG-W
Post Office Box 400
Mountain View, CA 93540
(415) 603-8658

CONSTRUCTION COST ESTIMATE

Work description: REPLACEMENT OF the cooling system FOR the two classrooms at KUNIEDA NSARC Hilo, HI

ITEM	QUANTITY	UNIT PRICE	COST
Remove AND Reduct	1	$700	$700
INSALL NEW ENERGY			
EFFECIENT SYSTEM FOR AC	1	17,500	$17,500
SUB-TOTAL			18,200
Contingency + 15			2,730
Design Cost + 12			2,184
Construction Engineering Cost + 15			2,730
TOTAL			$25,844

ENCLOSURE 2
LONG RANGE (5 YEAR) MAINTENANCE PLAN

LONG RANGE MAINTENANCE PLAN

for the

SFC MINORU KUNIEDA USARC

HILO, HAWAII

Prepared by the

416TH ENCOM ESG-WEST
MOFFETT FIELD, CALIFORNIA

Performed on
19 MARCH 1996

Prepared on
20 MARCH 1996

LONG RANGE MAINTENANCE PLAN
FOR
KUNIEDA USARC
HILO, HAWAII

Date of USARC/OMS/AMSA/ECS Facilities Component Inspection: USARC, OMS

Date of last Facility Component Inspection: 8 MARCH 1994

Coordinate location of USARC/OMS/AMSA/ECS: INSTALLATION NUMBER 15900
FFID: HI-2104PHH08
470 WEST LANIKAULA STREET
HILO, HI

Condition Code Definition:

C1 - Item is generally in good condition and requires only routine maintenance and repair.

C2 - Item shows signs of partial failure of system components and needs immediate maintenance/repair/replacement.

C3 - Item shows signs of extensive or complete failure of system components or system and needs immediate maintenance/repair/replacement.

Leader of Evaluation Party conducting this inspection: LTC Joseph Moscariello
Telephone: 916-889-1129

KUNIEDA USARC

COMPONENT INSPECTION SUMMARY

(COSTS IN $000)

NO.	COMPONENT	CONDITION CODE	PROJECT AMOUNT CFY 0	PROJECT AMOUNT CFY+1	PROJECT AMOUNT CFY+2	PROJECT AMOUNT CFY+3	PROJECT AMOUNT CFY+4
1	CEILINGS	C1				$3.0	
2	WALLS	C1					$4.0
3	DOORS	C1					
4	WINDOWS	C1					
5	FLOORS	C1					
6	STAIRS	C1					
7	RESTROOMS/ SHOWERS	C1					
8	KITCHEN	C1					
9	ELECTRICAL	C1					
10	PLUMBING	C1					
11	HEATING	C1					
12	COOLING	C1		$15.0			
13	SITE AND GROUNDS	C2		$10.0	$5.0	$7.0	
14	BUILDING EXTERIOR	C3	$25.0	$15.0			
15	ROOF	C3	$34.0	$12.0			
16	FENCING AND GATES	C1		$2.0	$1.0		
17	PAVEMENT	C2	$12.0	$3.0			
18	VEHICLE MAINT AREA	C3		$120.0			
19	PHYSICAL SECURITY	C2		$12.0	$23.0		
20	OTHER	C2		$1.0	$3.0		
TOTAL PROJECT COSTS BY FY:			$71.0	$190.0	$32.0	$10.0	$4.0

LONG RANGE PLAN
COMPONENT AREA CHECKLISTS
KUNIEDA USARC

COMPONENT AREA:

(1) CEILING

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
CORRIDOR - CEILING STAIN FROM ROOF LEAK

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
			$3.0	

(2) WALLS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
				$4.0

LONG RANGE PLAN
COMPONENT AREA CHECKLISTS
KUNIEDA USARC

COMPONENT AREA:

(3) DOORS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

(4) WINDOWS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

LONG RANGE PLAN
COMPONENT AREA CHECKLISTS
KUNIEDA USARC

COMPONENT AREA:

(5) FLOORS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

(6) STAIRS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

COMPONENT AREA:

(7) RESTROOMS/SHOWERS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

(8) KITCHEN

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

COMPONENT AREA:

(9) ELECTRICAL

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

(10) PLUMBING

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

LONG RANGE PLAN
COMPONENT AREA CHECKLISTS
KUNIEDA USARC

COMPONENT AREA:

(11) HEATING

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4

(12) COOLING

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: GOOD
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
AC SYSTEM - REPAIRS ARE COSTLY TO MAINTAIN THE UNIT

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$15.0			

COMPONENT AREA:

(13) SITE AND GROUNDS

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: POOR
CONDITION CODE: C2
CONDITION AT THIS INSPECTION: POOR
CONDITION CODE: C2

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
DRAINAGE - THE SURFACE DISCHARGE IS ABOVE THE MRL

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$10.0	$5.0	$7.0	

(14) BUILDING EXTERIOR

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: POOR
CONDITION CODE: C2
CONDITION AT THIS INSPECTION: FAILURE
CONDITION CODE: C3

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
PAINT - EXTERIOR IS PEELING OFF IN CHUNKS BECAUSE OF THE PAINT FAILURE. THE PAINT CONTAINS LEAD.

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 2

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
$25.0	$15.0			

COMPONENT AREA:

(15) ROOF

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: FAILURE
CONDITION CODE: C3

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
ASSEMBLY HALL - ROOF LEAKS ARE EXTENSIVE AND THE WATER WILL CAUSE EXTENSIVE DAMAGE IF NOT FIXED.

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 1

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
$34.0	$12.0			

(16) FENCING AND GATES

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: FAIR
CONDITION CODE: C1

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$2.0	$1.0		

COMPONENT AREA:

(17) PAVEMENT

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: FAIR
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: POOR
CONDITION CODE: C2

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE
MEP AREA - NEEDS OVERLAY DONE TO KEEP FROM DETERIORATING

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 4+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
$12.0	$3.0			

(18) VEHICLE MAINTENANCE AREA

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: POOR
CONDITION CODE: C2
CONDITION AT THIS INSPECTION: FAILING
CONDITION CODE: C3

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
VEHICLE MAINTENANCE NEEDS RESURFACING WITH AC

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$120.0			

COMPONENT AREA:

(19) PHYSICAL SECURITY

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: GOOD
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: FAIR
CONDITION CODE: C2

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE:
IDS NEEDS UPGRADING FOR ARMS VAULT

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$12.0	$23.0		

(20) OTHER

DATE OF INSTALLATION OF THIS EXISTING COMPONENT: 1967
DATE OF LAST MAINTENANCE TO THIS COMPONENT: 1991
DATE OF LAST INSPECTION: 3/7/94
CONDITION AT LAST INSPECTION: GOOD
CONDITION CODE: C1
CONDITION AT THIS INSPECTION: POOR
CONDITION CODE: C2

SIGNS OF FAILURE IN THE EXISTING COMPONENT SYSTEM ARE
SITE - SEVEN SECURITY LIGHTS NEED TO BE REPLACED

ESTIMATED YEARS OF REMAINING LIFE EXPECTANCY: 5+

ESTIMATE REPAIR COST BY FISCAL YEAR ($000):

FY0	FY+1	FY+2	FY+3	FY+4
	$1.0	$3.0		

ENCLOSURE 3
FIRE PREVENTION DATA

DA 5034-R SPACE ALLOWANCES WORKSHEET
PROJECT ID : 00001
PROJECT TITLE : wrksht hilo
FACILITY ID : HI003
FACILITY TITLE : SFC MINORU KUNIEDA USARC
FACILITY LOCATION : HILO, HI
PAGE : 1

SPACE	SF PER REG	APPROVED SF	EXIST SF	REMARKS
I. TRAINING BUILDING				
A. ADMINISTRATIVE	2,740	2,740	2,352	
1. FULL TIME	1,080	1,080		NOTE 1a1
2. UNIT EXCLUSIVE	120	120		NOTE 1a2
3. UNIT COMMON	690	690		NOTE 1a3
4. RECRUITING/RETENTION	250	250		NOTE 1a4
5. ADMIN SUPPORT	120	120		
a. GENERAL	120	120		NOTE 1a5a
b. RCAS	0	0		NOTE 1a5b
6. LOBBY	480	480		NOTE 1a6
B. ASSEMBLY AREA	3,300	3,300	3,518	
1. ASSEMBLY AREAS	3,000	3,000		NOTE 1b1
2. CHAIR & TABLE STORAGE	300	300		NOTE 1b2
C. KITCHEN - STD DESIGN	0	0	480	NOTE 1c1
D. WEAPONS AREA	320	320	317	
1. VAULT	220	220		NOTE 1d1
2. ARMORER	100	100		NOTE 1d2
E. EDUCATIONAL AREAS	960	960	1,531	
1. CLASSROOMS	300	300		NOTE 1e1
2. LIBRARY READING ROOM	300	300		NOTE 1e2
3. LIBRARY STORAGE	30	30		NOTE 1e3
4. LEARNING CENTER	100	100		NOTE 1e4
5. TRAINING AID STORAGE	30	30		NOTE 1e5
6. COMSEC TRAINING	100	100		NOTE 1e6
7. COMSEC STORAGE	100	100		NOTE 1e7
8. USARF INSTRUCTOR ROOM	0	0		NOTE 1e8
9. USARF PUBLICATION STORAGE	0	0		NOTE 1e9
F. STORAGE AREAS	1,619	1,619	1,904	
1. UNIT/INDIVIDUAL	884	884		NOTE 1f1
2. STAGING AREA	89	89		NOTE 1f2
3. SUPPLY OFFICE	96	96		NOTE 1f3
4. JANITORIAL STORAGE	50	50		NOTE 1f4
5. FLAMMABLE STORAGE	0	0		NOTE 1f5
6. CONTROLLED WASTE	0	0		NOTE 1f6
7. FACILITY MAINTENANCE	500	500		NOTE 1f7
G. SPECIAL TRAINING AREAS	500	500	0	
1. RIFLE RANGE	0	0		NOTE 1g1
2. PHOTO LAB	0	0		NOTE 1g2
3. BAND ROOM	0	0		NOTE 1g3
4. MEDICAL SECTION	0	0		NOTE 1g4
5. PHYSICAL EXAM WING	0	0		NOTE 1g5
6. SCIF	0	0		NOTE 1g6
7. SOIL TESTING LAB	0	0		NOTE 1g7
8. G. O. CONFERENCE	0	0		NOTE 1g8
9. DRAFTING ROOM	0	0		NOTE 1g9
10. PHYSICAL READINESS	500	500		NOTE 1g10
11. WWMCCS	0	0		NOTE 1g11
12.	0	0		NOTE 1g12
13.	0	0		NOTE 1g13
14.	0	0		NOTE 1g14
15.	0	0		NOTE 1g15

DA 5034-R SPACE ALLOWANCES WORKSHEET
PROJECT ID : 00001
PROJECT TITLE : wrksht hilo
FACILITY ID : HI003
FACILITY TITLE : SFC MINORU KUNIEDA USARC
FACILITY LOCATION : HILO, HI
PAGE : 2

SPACE	SF PER REG	APPROVED SF	EXIST SF	REMARKS
H. SUPPORT AREA	3,265	3,265	1,834	
1. MEN`S TOILETS & SHOWERS	350	350		NOTE 1h1
2. WOMEN`S TOILETS & SHOWERS	225	225		NOTE 1h2
3. UNISEX HANDICAP TOILET	75	75		NOTE 1h3
4. LOCKER ROOM	1,100	1,100		NOTE 1h4
5. VENDING ALCOVE	48	48		NOTE 1h5
6. BREAK AREA	218	218		NOTE 1h6
7. MECHANICAL	1,049	1,049		NOTE 1h7
8. ELECTRICAL	100	100		NOTE 1h8
9. TELEPHONE	100	100		NOTE 1h9
TOTAL CENTER NET AREA	12,704	12,704		
CIRCULATION ALLOWANCE (15% or 22%)	1,906	1,906		NOTE 1h10
STRUCTURAL ALLOW (10% OF NET SF)	1,271	1,271		NOTE 1h11
TOTAL CENTER GROSS AREA	15,881	15,881	14,463	
II. MAINTENANCE SHOPS				
A. ORGANIZATION MAINTENANCE SHOP	1,051	1,051	11,936	
1. SHOP OFFICE	300	300		NOTE 2a1
2. UNISEX TOILET	75	75		NOTE 2a2
3. TOOL & PARTS ROOM	192	192		NOTE 2a3
4. STORAGE ROOM	192	192		NOTE 2a4
5. BATTERY ROOM	50	50		NOTE 2a5
6. FLAMMABLE STORAGE	50	50		NOTE 2a6
7. CONTROLLED WASTE STORAGE	192	192		NOTE 2a7
8.	0	0		NOTE 2a8
9.	0	0		NOTE 2a9
B. AREA MAINTENANCE SUPPORT ACTIVITY	0	0	1,649	
1. SHOP OFFICE	0	0		NOTE 2b1
2. MEN`S TOILET	0	0		NOTE 2b2
3. WOMEN`S TOILET	0	0		NOTE 2b3
4. LOCKER ROOM	0	0		NOTE 2b4
5. CLASSROOM/BREAK AREA	0	0		NOTE 2b5
6. TOOL ROOM	0	0		NOTE 2b6
7. SUPPLY ROOM	0	0		NOTE 2b7
8. BATTERY ROOM	0	0		NOTE 2b8
9. COMMO/ELECTRONICS SHOP	0	0		NOTE 2b9
10. INSTRUMENT REPAIR	0	0		NOTE 2b10
11. SMALL ARMS REPAIR	0	0		NOTE 2b11
12. SMALL ARMS VAULT	0	0		NOTE 2b12
13. FLAMMABLE STORAGE	0	0		NOTE 2b13
14. CONTROLLED WASTE STORAGE	0	0		NOTE 2b14
15.	0	0		NOTE 2b15
16.	0	0		NOTE 2b16
C. JOINT MAINT AREAS (OMS/AMSA)	2,437	2,437		
1. WORK BAYS	2,240	2,240		NOTE 2c1
2. MECHANICAL/CUSTODIAL	197	197		NOTE 2c2
3. OTHER	0	0		NOTE 2c3
TOTAL SHOP NET AREA	3,488	3,488		
STRUCTURAL ALLOWANCE (10% OF NET SF)	349	349		NOTE 2c4
TOTAL SHOP GROSS AREA	3,838	3,837	1,920	

DA 5034-R SPACE ALLOWANCES WORKSHEET
PROJECT ID : 00001
PROJECT TITLE : wrksht hilo
FACILITY ID : HI003
FACILITY TITLE : SFC MINORU KUNIEDA USARC
FACILITY LOCATION : HILO, HI
PAGE : 3

SPACE	SF PER REG	APPROVED SF	EXIST SF	REMARKS
III. UNHEATED STORAGE				
A. UNIT/INDIVIDUAL STORAGE	221	221	0	NOTE 3a
B. STAGING AREA	23	23		NOTE 3b
TOTAL UNHEATED STORAGE NET AREA	244	244		
STRUCTURAL ALLOWANCE (10% OF NET SF)	25	25		NOTE 3c
TOTAL UNHEATED STORAGE GROSS AREA	269	269		
IV. SUPPORTING FACILITIES				
A. PRIVATELY OWNED VEHICLE	1,260	1,260		
1. PARKING - CENTER (SY)	1,260	1,260		NOTE 4a1
2. PARKING - AMSA (SY)	0	0		NOTE 4a2
B. MILITARY EQUIPMENT PARK	900	900		
1. OMS (SY)	900	900		NOTE 4b1
2. AMSA (SY)	0	0		NOTE 4b2
C. WASH PLATFORMS	1	1		
1. OMS (EA)	1	1		NOTE 4c1
2. AMSA (EA)	0	0		NOTE 4c2
D. COVERED STORAGE (SF)	0	0		NOTE 4d
E. MEP FENCING (LF)	360	360		NOTE 4e
F. MEP LIGHTING (EA)	1	1		NOTE 4f
G. ACCESS ROADS (SY)	90	90		NOTE 4g

V. TOTAL SQUARE FOOTAGE FOR:	CENTER	SHOP	UNHEATED STORAGE
A. AUTHORIZED SIZE	15,881	3,838	269
B. APPROVED SIZE	15,881	3,837	269
C. EXISTING SIZE FOR ALTER	14,463	1,920	0
D. ESTIMATED SIZE OF ADDITION	1,418	1,917	

VI. CENTER STATISTICS	TOTAL PERSONNEL	WEEKEND
A. AUTHORIZED STRENGTH	44	
B. LARGEST DRILL WEEKEND	44	2
C. LARGEST ADMIN WEEKEND	10	2
D. LARGEST MAINT WEEKEND	6	2

BASIC PROJECT DATA
Project ID : 00001
Project Title : wrksht hilo
Date : 1996//10
Page : 1

* BASIC INFORMATION
RSC: 9TH ARCOM FACILITY ID: HI003
Facility Name : SFC MINORU KUNIEDA USARC
Street : 470 WEST LAIKAULA STREET
City : HILO State: HI Zip: 96720-4038

Preparation Date of documents : /

* PATTERN OF FACILITY USAGE
Full Time Personnel : 5 Days/Week
Reservist : 2 Nights/Week
Reservist : 2 Weekends/Month

* STATE FACILITY REVIEW BOARD RECOMMENDATION
Date of Recommendation:
Recommendation is UNILATERAL Construction

* EXISTING SIZES

Administrative	:	2352
Assembly	:	3518
Kitchen	:	480
Weapons	:	317
Educational	:	1531
Storage	:	1904
Special Training	:	0
Support	:	1834
Total Facility	:	14463
Total Shop	:	1920
Unheated Storage	:	0

* SPECIAL TRAINING AREAS

Band Room	: N
Physical Exam Wing	: N
Rifle Range	: N
Soil Testing Lab	: N
Photo Lab	: N
S.C.I.F.	: 0
Medical Section	: 0

* LAND ACQUISITION AND ADDITIONAL PROJECTS
Acres Required For Land Acquisition: 0.00
Method of Acquisition :
Acres Available : 3.73

Additional Projects Planned in Next Four Years
Project 1) NONE
Project 2)

* NEAREST FIVE MILITARY INSTALLATIONS

Component	Location	Distance in Miles
1) ARNG	HILO, HI	2
2) ARNG	KONU, HI	68
3) USA	POHAKULOA TRAINING, HI	30
4) USA	KMC, HI	30
5)		0

BASIC PROJECT DATA
Project ID : 00001
Project Title : wrksht hilo
Date : 1996//10
Page : 2

* UNIT INFORMATION
Unit Name : DET 1 , CO B, 100/442
Unit ID Code : WRMAB1
Drill Weekend : 2
Type of Unit : MTOE UNIT

Accounts :
Unit Supply : Y
COMSEC : Y
WWMCCS : N
Individual Weapons : Y

* UNIT STRENGTHS

RESERVE:	Officer	WO	Enlisted	Civilian
Required :	1	0	21	N/A
Authorized :	1	0	21	N/A
Assigned :	0	0	22	N/A
FULL TIME:				
Authorized :	1		7	0
Assigned :	1		7	0

* DISTRIBUTION OF AUTHORIZED FULL TIME PERSONNEL
Administrators : 8
Supply : 0
Maintenance Administrative : 0
Automotive/Engineer Mechanics: 0

* SPECIALIZED SPACE
Major General : 0
Brigadier General : 0
Colonel (Commander) : 0
Commanders Below Colonel : 0
Principal Staff Officers : 0

*RESERVE PERSONNEL REQUIRING SPECIALIZED SPACE
Members Requiring Open Office Space : 5
Cooks : 0
Automotive/Engineer Mechanics : 1
Maintenance Administrative Personnel : 2
Draftpersons : 0

* UNIT EQUIPMENT

	Authorized	Assigned	Actual
Tracked Vehicles :	0	0	0
Wheeled Vehicles :	7	7	7
Trailers :	1	1	1
Crew Served Weapons :	2	2	
RCAS Workstations :	0		

* MISSION INFORMATION
This is an EXISTING Mission
Modernization : Y
Replacement : N
New Construction : N

BASIC PROJECT DATA
Project ID : 00001
Project Title : wrksht hilo
Date : 1996//10
Page : 3

* UNIT INFORMATION
Unit Name : ENGR PLT, CO B, 411TH EN
Unit ID Code : WRX9B1
Drill Weekend : 2
Type of Unit : MTOE UNIT

Accounts :
Unit Supply : N
COMSEC : N
WWMCCS : N
Individual Weapons : N

* UNIT STRENGTHS

RESERVE:	Officer	WO	Enlisted	Civilian
Required :	1	0	21	N/A
Authorized :	1	0	21	N/A
Assigned :	0	0	20	N/A
FULL TIME:				
Authorized :	0		1	0
Assigned :	0		1	0

* DISTRIBUTION OF AUTHORIZED FULL TIME PERSONNEL
Administrators : 1
Supply : 0
Maintenance Administrative : 0
Automotive/Engineer Mechanics: 0

* SPECIALIZED SPACE
Major General : 0
Brigadier General : 0
Colonel (Commander) : 0
Commanders Below Colonel : 0
Principal Staff Officers : 1

*RESERVE PERSONNEL REQUIRING SPECIALIZED SPACE
Members Requiring Open Office Space : 5
Cooks : 0
Automotive/Engineer Mechanics : 5
Maintenance Administrative Personnel : 3
Draftpersons : 0

* UNIT EQUIPMENT

	Authorized	Assigned	Actual
Tracked Vehicles :	1	1	1
Wheeled Vehicles :	8	8	8
Trailers :	1	1	1
Crew Served Weapons :	1	1	
RCAS Workstations :	0		

* MISSION INFORMATION
This is an EXISTING Mission
Modernization : N
Replacement : Y
New Construction : N

BASIC PROJECT DATA
Project ID : 00001
Project Title : wrksht hilo
Date : 1996//10
Page : 4

UIC	UNIT NAME	RES STRENGTHS OFF	WO	ENL	FULL TIME STRENGTHS OFF	ENL	CIV
WRMAB1	DET 1 , CO B, 100/442	1	0	21	1	7	0
WRX9B1	ENGR PLT, CO B, 411TH EN	1	0	21	0	1	0

ENCLOSURE 4
ENERGY AUDIT

8. Petroleum, Oil, and Lubricant (POL) Management
9. Solid Waste Management
10. Storage Tank Management
11. Toxic Substances Management (PCBs, Asbestos, Radon, Lead-Based Paint)
12. Wastewater Management
13. Water Quality Management

1.2 SUMMARY OF FINDINGS

Ms. Sharon Kuniyoshi, Facility Manager, Mr. Wayne Mitsko, 9th RSC Environmental Coordinator, and Mr. Silva, AMSA Supervisor, are managing the environmental compliance program at the Kunieda USAR Center and AMSA subshop. The activities and equipment of the units stationed at the center provide a minor potential for environmental concerns.

A total of two minor negative findings were found during this assessment. Two paint cans containing flammable oil based paint were stored outdoors outside the kitchen. The facility manager performed an on the spot correction and removed the paint cans. Also, rainwater filled oil drip pans beneath the bulldozers parked in the MEP area. Oil from the drip pans was draining off the asphalt pavement into the grass and a natural stream beyond.

The USARC and AMSA subshop has an effective environmental management program with the necessary procedures and equipment in place to handle environmental problems should they occur. The AMSA subshop posts the required Material Safety Data Sheets (MSDS) and has spill kits in-place. Also, materials are properly stored in the Hazmat shed. The center is in full compliance and up to date with the training requirements for all key personnel involved with environmental issues.

The following text briefly summarizes the observations for each compliance protocol. The protocol categories are discussed in the order they appear in the ECAS manual.

Air Emissions Management

No findings were observed for this protocol.

Cultural Resources Management

No findings were observed for this protocol.

Hazardous Materials Management

One negative finding was found. Improper storage of paints on the concrete outdoors outside the kitchen area.

Hazardous Waste Management

No findings were observed for this protocol.

Natural Resources Management

No findings were observed for this protocol.

Other Environmental Issues (NEPA, Noise, IRP, PP, Program Management)

No findings were observed for this protocol.

Pesticide Management

No findings were observed for this protocol.

POL Management

One negative findings was observed for this protocol. Rain water overflow of drip pans in MEP area. Oil draining off asphalt pavement into grassy area and a natural stream beyond.

Solid Waste Management

No findings were observed for this protocol.

Storage Tank Management

No findings were observed for this protocol.

Toxic Substances Management (PCBs, Asbestos, Radon, Lead-Based Paint)

No findings were observed for this protocol.

Wastewater Management

No findings were observed for this protocol.

Water Quality Management

No findings were observed for this protocol.

INSTALLATION SCREEN

*FFID: HI-2104HI003
Installation Name: SFC MINORU KUNIEDA USARC
Installation Category: R
MACOM: USARC

MUSARC: 9TH ARCOM
BASOPS ARCOM: 9TH
Support Installation: USASCH
Facility / Activity Type: 1) RM 2) RA 3) 4) 5)

EPA Region: 9
Congressional District:
Address: 470 WEST LAIKAULA STREET

City: HILO
State: HI
Country: USA
Zip Code: 96720-4038

ASSESSMENT SCREEN

*Fiscal Year: 2000 *Assessment Date (MM/DD/YYYY): 04/06/2000
*Assessment Type: E
*Manual Used: T

Manual Supplement Used: S

Local Manual (OCONUS: MACOM Specific Manual)
Date (MM/YYYY): /
Author:
Title:

State Manual (OCONUS: Country Specific Manual)
Date (MM/YYYY): /
Author:
State Postal Code or Country Code: HI

*Assessor Name: 416TH ENCOM FE-TDA
Point of Contact: MAJ J.A. DIAZ

Address: P.O. BOX 400

City: MOFFETT FIELD
State: CA
Zip Code: 94035-0400
Phone: (650)603-8658

For Contract ECAS

Contract Number:
Delivery Order Number:
Contracting Office:

TABLE 1-1
SUMMARY OF FINDINGS

INSTALLATION: SFC MINORU KUNIEDA USARC Fiscal Year: 2000
ID: HI-2104HI003

SECTION NO.	TITLE	REGULATORY I	REGULATORY II	REGULATORY HS	MANAGEMENT POS	MANAGEMENT III	MANAGEMENT HS	TOTAL
A	Air Emissions	0	0	0	0	0	0	0
C	Cultural Resources	0	0	0	0	0	0	0
HM	Hazardous Materials	1	0	0	0	0	0	1
HW	Hazardous Waste	0	0	0	0	0	0	0
NR	Natural Resource	0	0	0	0	0	0	0
O1	Environmental Impacts	0	0	0	0	0	0	0
O2	Environmental Noise	0	0	0	0	0	0	0
O3	IRP	0	0	0	0	0	0	0
O4	Pollution Prevention	0	0	0	0	0	0	0
O5	Program Management	0	0	0	0	0	0	0
PM	Pesticide	0	0	0	0	0	0	0
PO	POL	1	0	0	0	0	0	1
SO	Solid Waste	0	0	0	0	0	0	0
ST	Storage Tanks	0	0	0	0	0	0	0
T1	PCB	0	0	0	0	0	0	0
T2	Asbestos	0	0	0	0	0	0	0
T3	Radon	0	0	0	0	0	0	0
T4	Lead Based Paint	0	0	0	0	0	0	0
WA	Wastewater	0	0	0	0	0	0	0
[illegible]	Water Quality	0	0	0	0	0	0	0
	TOTALS	2	0	0	0	0	0	2

Data File Name Prefix: D:\ECAS\HI006
Date Summary Report Produced: 04/06/0

SECTION 2

BACKGROUND AND SCOPE

This section presents the background and scope for the environmental compliance assessment conducted at the Kunieda USAR Center.

2.1 BACKGROUND

The background section presents the objectives of the ECAS program, a description of the facility, and its management structure.

ECAS Objectives

The ECAS has been developed as a support service to installation commanders to help attain environmental compliance. This is accomplished through the following objectives:

- Establish the use of environmental compliance assessments as a means of ensuring the Army's compliance with all applicable Federal, State, DOD, and Army environmental laws and regulations.

- Assure Major Commands, Installation Commanders, Environmental Quality Control Committees, Environmental Coordinators, DPW personnel, and Natural Resource managers that their environmental programs are effectively addressing environmental problems that could:
  - Impact Mission Effectiveness
  – Jeopardize the health and safety of facility personnel or the general public
  – Significantly degrade the environment
  – Expose the Army and its people to avoidable financial liabilities as a result of non-compliance with environmental requirements
  – Erode public confidence in the Army and the defense establishment
  – Expose individuals to civil and criminal liability

- Secure information that will permit installation commanders to anticipate and prevent future environmental problems

- Enhance management by establishing a system for environmental compliance management

- Provide data for use in identifying, programming, and budgeting environmental requirements

- Provide accurate and complete information on the status of installation compliance programs

Facility Description

The Kunieda USAR Center is located at 470 West Lanikaula Street, Hilo, Hawaii, 96720-4038. Co-located with the center is an AMSA (G) subshop.

The USARC is bounded on the west by vacant land used for a flood control facility, on the east by the University of Hawaii, on the north by a YMCA, and on the south by a pre-school.

The Kunieda USAR Center is located on a 3.3-acre site. The facilities at the center include:

- Administration building: single story, masonry block with steel framed built-up asphalt composition roof; includes arms vault.
- Assembly hall: single story, masonry block with steel framed sheet metal roof; includes kitchen and supply room.
- AMSA subshop: single-bay, vehicle maintenance shop; masonry block with steel framed asphalt composition roof; includes office and battery room.
- AMSA subshop covered parking: steel frame with sheet metal roof & walls; asphalt pavement.
- Covered wash rack; uses recycled water unit.
- One Hazmat storage shed.
- Covered Hazmat collection area: wood frame with sheet metal roof; concrete floor and spill pallets.
- POV parking & military equipment parking (MEP) areas, asphalt.
- Two MEP covered parking: steel frame with sheet metal roof & walls; asphalt pavement.

The USARC is occupied by CO A, 411th Engr Bn. and Det 1, CO B, 100th Bn, 442d Inf., which includes 5 full-time staff, and up to 80 reservists. There is approximately 22 vehicles and heavy equipment on site.

Management Structure

The 9th RSC environmental coordinator, facility manager, and the AMSA supervisor, manage the majority of the environmental protocols covered during the ECAS assessment.

2.2 SCOPE

This section summarizes the activities that were reviewed for each environmental protocol and the evaluation process.

ACTIVITY REVIEW

The facility was evaluated with regard to the following protocols:

Air Emissions Management

The facility lies on the island of Hawaii, State of Hawaii in the middle of the Pacific Ocean and is subject to constant trade winds. It is an attainment area for air quality purposes. There are no large boilers or heating systems for the center or any other major emissions sources. No facilities for open burning were observed. The center manager stated that all refuse disposal is handled through a collection and off site disposal contract.

The Clean Air Act sources reviewed included the following:
- State and Local air pollution regulations
- Facility Records
- All potential air pollution sources (gas burners, fire extinguisher systems, solvent degreaser, vehicle exhaust in OMS/AMSA shops, etc.)
- Air intake vents
- Air emissions stacks

Cultural Resources Management

The USARC falls under the jurisdiction of United States Army Garrison-Hawaii, Schofield Barracks (USAG-HI) for Cultural Resources Management. The center is not on or adjacent to any known or documented archeological sites or sites of significant historical importance.

Cultural Resource sources reviewed included the following:
- Facility records
- Interview with Facility Manager

Hazardous Materials Management

A comprehensive Hazardous Materials Management program exists and compliance manual is on hand at the center. Applicable unit personnel have received adequate training in hazardous material management procedures. The center is adequately supported by the USAG-HI.

The Hazardous Materials Management sources reviewed included the following:
- Facility records
- Hazardous Materials storage areas
- Shop and laboratory activities
- Supply and storage areas
- Printing/reproduction areas

Hazardous Waste Management

A comprehensive Hazardous Waste Management program exists and compliance manual is on hand at the center. Applicable unit personnel have received adequate training in hazardous waste management procedures. The center is adequately supported by the USAG-HI.

The Hazardous Waste Management sources reviewed included the following:
- Facility records (manifests, accumulation point inspection records, management plan, etc.)
- Accumulation points
- Storage facilities

Natural Resources Management

The center falls under the natural resource management plan of the USAG-HI.

The Natural Resources Management sources reviewed included the following:
- Facility records
- Interview with Facility Manager

Other Environmental Issues (NEPA, Noise, IRP, PP, Program Management)

There are no significant noise generating activities that affect surrounding properties/activities at the center. HQ, USARPAC, Hawaii, has approved an ICUZ exemption. Environmental program management at the center is excellent. All records and required management plans are comprehensive and up to date. Required training records are being maintained.

Sources reviewed included the following:
- Facility records
- Interview with facility Manager
- SPCC and Pollution Prevention Plans

Pesticide Management

All vector control activities are contracted out. No pesticides are mixed, handled, dispensed, or stored by the facility personnel.

Pesticide Management sources reviewed included the following:
- Center buildings and grounds
- Facility records

POL Management

The OMS has a valid SPCCC plan certified by a professional engineer. There is an MEP, maintenance activities, and POL products stored on the center grounds. Annual monitoring of storm water from discharge points is conducted. The center is covered by statewide NPDES General Permit conditions for storm water. The diligent use of drip pans by the facility aids in their compliance status.

POL Management sources reviewed included the following:

- Facility records
- POL storage areas
- MEPs
- Shop activities
- Center grounds

Solid Waste Management

The collection and disposal of solid waste is by contract. Dumpsters are strategically located and placarded according to Army regulations for solid waste storage between collection. The center participates in a recycling program. No instances of incompatible or illegal wastes being disposed in center dumpsters were evident.

The Solid Waste Management sources reviewed included the following:

- Facility records
- Areas where solid waste is accumulated
- Storage areas

Storage Tank Management

No fuel is dispensed at this center. It is handled by credit card at commercial facilities. No UST systems are present or are known to have been present in the past on the OMS grounds.

POL Management sources reviewed included the following:

- Facility records
- UST and AST areas (if any)

Toxic Substances Management (PCBs, Asbestos, Radon, Lead-Based Paint)

All required asbestos, radon, and lead based paint surveys have been performed. No PCB transformers or other equipment are on center grounds or any evidence of past PCB contamination is present.

Toxic Substance Management sources reviewed included the following:

- Facility records
- Interview with the Facility Manager
- Center buildings and grounds

Wastewater Management

The POTW is used for wastewater collection, treatment, and disposal.

The Wastewater Management sources reviewed included the following:

- Facility records
- Interview with the Facility Manager

Water Quality Management

Drinking water is supplied by the county water distribution system. The county is responsible for sampling and testing drinking water and administers the centers water quality issues.

The Water Quality Management sources reviewed included the following:

- Facility records
- Interview with the Facility Manager

SECTION 3

FINDINGS

ECAS

This section describes all regulatory findings (federal, state, local, DOD, and Army) observed during the assessment and offers suggested/alternative corrective actions for each. The findings are categorized by numbered protocols contained in the ECAS manual, with a notation to clarify an environmental or a health/safety finding.

The classes of environmental deficiencies are defined below:

Class I: Findings of immediate noncompliance with an environmental regulation, compliance agreement, consent order, or an existing notice of violation.

Class II: Findings of future noncompliance with an environmental regulation, compliance agreement, consent order, or an existing NOV.

Class III: Findings for which there are no specific federal, state, or local regulatory requirements. These findings will include deviations from Army regulations, DOD Directives, or other good management practices.

Health/Safety findings are generally related to the Occupational Safety and Health Act, Department of Transportation or National Fire Protection Association rules and/or regulations. These are noted in the ECAS manual.

Findings relating to these classes of deficiencies are detailed in this section.

FINDING ID: HM001
MANUAL QUESTION NUMBER: HM-001-004
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: KITCHEN WASHING AREA OUTSIDE NEAR THE GREASE TRAP
IFS FACILITY NUMBER:
FACILITY TYPE: USARC(MB) - U.S. ARMY RESERVE CENTER - MAIN BLDG

FINDING DESCRIPTION: A one-gallon can of a flammable oil-based paint was stored outside of the kitchen in the weather and the container was severly deteriorated. This could result in a serious spill situation.

CRITERIA: Specific housekeeping requirements must be met in areas where hazardous materials are stored (29 CFR 1910.176(c)).

FINDING COMMENTS: Container was probably left by contractors doing a roof repair on the facility. Thorough briefings on facilty procedures and standards regarding environmental issues by RSC environemntal personnel or the facility manager to contractors and periodic spoty checking during the project may allevaiate future problems of this nature.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Corrected on the spot by the facility manager. The container was removed to the proper storage area.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA?: Y__ N__
EXPLAIN:_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS:_____

NAME/OFFICE/PHONE:_____ DATE:_____

PO.20.3 #1 I FEDERAL FINDING POL

FINDING ID: POL001
MANUAL QUESTION NUMBER: PO-020-003
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: MEP BEHIND THE FACILITY MAINTENACE SHOP
IFS FACILITY NUMBER:
FACILITY TYPE:

FINDING DESCRIPTION: Drip pans containing significant amounts of oil are overflowing after heavy rains and runoff is discharging off site into a natural watercourse. There is evidence of oil sludge accumulating in the vegetation where runoff leaves the paved MEP area.

CRITERIA: Drainage water which is determined to contain petroleum products in harmful quantities must be treated prior to discharge to meet applicable water quality standards (40 CFR 112.7 (e)(2)).

FINDING COMMENTS: This finding is a direct result of responsibility to perform a routine housekeeping requirement not being assigned to appropriate personnel. The alternative, if not acountability can be assigned, is to berm the MEP and collect all water for treatment. This is not really a viable alternative given the heavy rainfall in the Hilo area and the large amount of runoff that would need to be pre-treated.

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): Drip pans should be drained into the facility wash rack system daily.

STATUS OF CORRECTION:

********** INSTALLATION'S RESPONSE: **********

1) CORRECTIVE ACTION (CA) SELECTED:_____

_____

_____

_____

2) CURRENT STATUS OF THE CA:_____
3) ARE ADDED DETAILS OR COST DATA NEEDED TO DESCRIBE THIS CA?: Y__ N__
EXPLAIN:_____

_____

_____

4) ESTIMATED COMPLETION DATE FOR CA:_____
5) REVIEWER'S REMARKS:_____

_____

_____

_____

NAME/OFFICE/PHONE:_____ DATE:_____

NEGATIVE ECAS FINDINGS

MEP – DRIP PAN OVERFLOW TOWARDS FENCE

MEP – DRIP PAN OVERFLOW TOWARDS FENCE

OUTSIDE KITCHEN – IMPROPER STORAGE OF PAINT

DEPARTMENT OF THE ARMY
U.S. ARMY FACILITY ENGINEER GROUP
FACILITY ENGINEER CENTER-SOUTHWEST
2420 LISCUM ROAD, BUILDING 133, SUITE 63
FORT SAM HOUSTON, TX 78234-5063

AFRC-ENIL-FE-SW 23 July 2002

MEMORANDUM FOR 9th RSC DCSENG, Building 1557 Pass St. Ft. Shafter Flats, Honolulu, HI 96819-2135, Attn: LTC Losey, Asst. DCSENG

SUBJECT: ECAS, FCS and Safety Assessment Report, 9th RSC Mission 2002

1. Enclosed is the final report outlining the findings and recommendations from the ECAS, FCS and Safety assessment completed 19-24 May 2002 by LTC David Wilkins and CPT Jeffrey Hartsell, FEC-SW, Project Team.

2. Point of contact for this report is the undersigned at (415) 717-9713.

Signed Original Document on File

DAVID M. WILKINS
LTC, EN, USAR
PROJECT LEADER

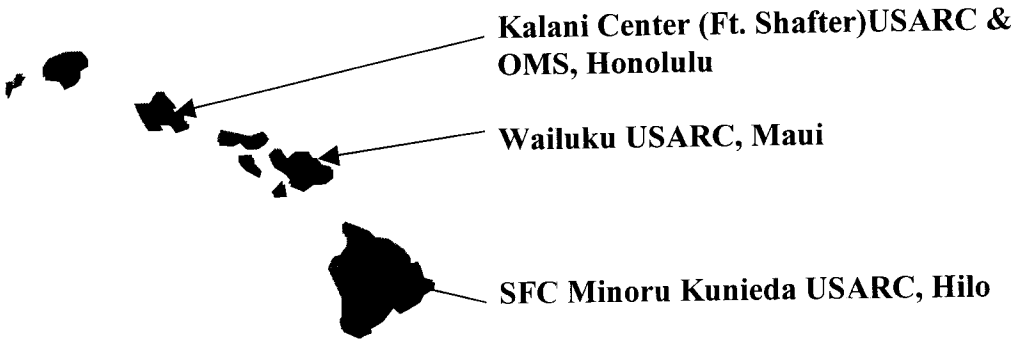
CF:
Director FEC-SW
SF FET Team Ldr.
Facility Manager – Kunieda USARC
Facility Manager – Kalani USARC
Facility Manager – Wailuku USARC
9th RSC DCSENG

U.S. Army Facility Engineer Group
416th Engineer Command
10 S. 100 South Frontage Road
Darien, IL 60561

Project Report FY02-1:

Environmental Compliance Assessment (ECAS)
Safety Assessment
Facility Condition Survey (FCS)

For



-9th Regional Support Command-
Fort Shafter, Hawaii

Prepared by:
Facility Engineer Center – Southwest
2420 Liscum Rd. Suite 63
Ft. Sam Houston, TX 78234

1 Aug 2002

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III. KUNIEDA USARC-HILO: VISIT SUMMARY

a. **ECAS**: The project team conducted an Environmental Compliance Assessment (ECAS) of the subject USAR Center and identified one Class I, two Class II's, and one Class III finding. The Class I finding pertained to the drainage of POL (oil) within the motorpool onto the ground. The Class II findings were for the inoperable wash rack located on site, and a 55 gallon drum of contaminated soil that has been there for nearly one year. The Class III finding was for the procedures being followed for washing down OMS bays, although, there is no drainage available to keep contamination from happening.

Overall Findings:

- **Regulatory** - Class I: 1 Class II: 2 HS: 0
  i. CLASS I: Run off in the rear of the motor pool has evidence of POL contamination and is in violation of 40 CFR (PO.015.002.R).
- **Management** – Pos: 0 Class III: 1 HS: 0

b. FCS: *Note: many of these findings will be corrected/addressed as part of the facility renovation project scheduled for FY03.* **Overall**. The USARC is about 40 years old, circa 1964, and despite its age the property appears to be in good condition and well maintained. The major structural components of the buildings were in average condition, with the exception of the windows and HVAC systems that were in good condition. The parking areas are in good condition. New gutter and down spouts were installed in the past two years along with new HVAC units and roof repairs to all the buildings. **Major Component Deficiency:** The most significant problem at Hilo is the absence of a dozer parking pad. Maneuvering the dozer around the motorpool is damaging the asphalt surface.

c. SAFETY: Overall fire escape plans were good using a standard schematic and instruction. **(RAC III):** Units are storing items in the utility room, which poses a fire hazard. These items must be stored elsewhere. **(RAC III):** Units are storing flammable materials in unapproved areas. Paint, propane and flammable items must be stored in approved cabinets. **(RAC III):** There is no fire escape plan in the Kitchen and storage cage areas. **(RAC III):** Emergency lighting systems and fire extinguishers are inspected and certified annually by a contractor, but monthly checks are not being done at the unit level. **(RAC III):** Recommend vehicle operators get documented training on use of hand-held , vehicle-mounted, extinguishers. **(RAC II):** The kitchen fire suppression system is not certified yet the unit still cooks in the kitchen. The unit must cease cooking operations until the system is fixed. **(RAC III):** Units must maintain MSDS for medical items, cleaning supplies and other items maintained in offices, the janitor closet or in the kitchen area. **(RAC III):** Load bearing tools, jacks, cranes and lifts must be load tested and certified annually. This is not being done.

VIII. APPENDIX 3B. KUNIEDA: FCS

KUNIEDA FCS – ADMIN

FAC ID: HI003 BLDG TYPE: Admin YEAR BUILT: 1980

FAC NUM: 1 GROSS SQ FT: 5,914 DATE OF SURVEY: 23-May-02

COMPONENT ROWS

	SYSTEM LIFETIME		EC (0-15%)	VG (16-24%)	GC (25-39%)	AC (40-59%)	FC (60-75%)	PC (76-100%)
EXTERIOR	60 YRS					X		
WINDOWS	15 YRS			X	Replaced 12 months ago			
SITE	20 YRS				X			
PAINTING (EXTERIOR)	10 YRS					X		
ELECTRICAL	25 YRS						X	
FLOORING	20 YRS					X		
CEILING	15 YRS					X		
PAINTING (INTERIOR)	10 YRS					X		
INTERIOR	40 YRS					X		
PLUMBING	25 YRS					X		
HVAC	20 YRS			X	Replaced 18 months ago			
ROOF	25 YRS					X		

SIGNS OF POOR COMPONENT CONDITIONS

EXTERIOR: Cracked or loose mortar joints, loose siding, structural cracks, etc.
WINDOWS: Cracked, broken, require glazing, etc.
SITE: Drainage problems, inadequate parking for MEP/POV. Holes or cracks in pavement. Adequate security lighting, etc.
PAINTING: Peeling, cracking, etc.

ELECTRICAL: Defective, broken, inadequate wiring, antiquated or tarnished lighting fixtures or service equipment, not wired for 3 phase.
FLOORING: Cracks, sagging, worn or torn spots. Expansion joint separation, etc.
CEILING: Missing tiles, water stained, cracked or broken, etc.
INTERIOR: Cracks in drywall, plaster, or block, missing or loose hardware, peeling paint, mildew, smoke or water stains, insect or rodent damage.
PLUMBING: Leaking faucets or pipe connections. Inadequate or antiquated plumbing fixtures.
HVAC: Inadequate or poorly spaced equipment. Antiquated systems, high operating costs, furnaces or boilers in poor repair, rusted ductwork, etc.
ROOF: Leakage, missing shingles, or tiles, sagging or decaying roof structures, damaged trusses, plugged roof.

CONDITION RANKINGS

EC (Excellent Condition, 0%-15%): Items that can normally be repaired or refinished, have been corrected or replaced .
VG (Very Good Condition,16%-24%): Items well maintained, many repaired, refinished or replaced.
GC (Good Condition 25%-39%): No obvious maintenance required, but neither is everything new.
AC (Average Condition, 40%-59%): Some evidence of deferred maintenance and normal obsolescence with age.
FC (Fair Condition, 60%-75%): Evidence of badly worn components. Much repair is needed.
PC (Poor Condition, 76%-100%): Components are worn out. Repair or refinish is needed. Excessive deferred maint.

KUNIEDA FCS – OMS

FAC ID: HI003 | BLDG TYPE: OMS | YEAR BUILT: 1980

FAC NUM: 3 | GROSS SQ FT: 1,801 | DATE OF SURVEY: 23-May-02

COMPONENT ROWS

	SYSTEM LIFETIME		EC (0-15%)	VG (16-24%)	GC (25-39%)	AC (40-59%)	FC (60-75%)	PC (76-100%)
EXTERIOR	60 YRS					X		
WINDOWS	15 YRS					X		
SITE	20 YRS					X		
PAINTING (EXTERIOR)	10 YRS					X		
ELECTRICAL	25 YRS					X		
FLOORING	20 YRS					X		
CEILING	15 YRS					X		
PAINTING (INTERIOR)	10 YRS					X		
INTERIOR	40 YRS					X		
PLUMBING	25 YRS					X		
ROOF Lower section new gutters and D/S, upper section resealed.	25 YRS				X			

SIGNS OF POOR COMPONENT CONDITIONS

EXTERIOR: Cracked or loose mortar joints, loose siding, structural cracks, etc.
WINDOWS: Cracked, broken, require glazing, etc.
SITE: Drainage problems, inadequate parking for MEP/POV. Holes or cracks in pavement. Adequate security lighting, etc.
PAINTING: Peeling, cracking, etc.

ELECTRICAL: Defective, broken, inadequate wiring, antiquated or tarnished lighting fixtures or service equipment, not wired for 3 phase.
FLOORING: Cracks, sagging, worn or torn spots. Expansion joint separation, etc.
CEILING: Missing tiles, water stained, cracked or broken, etc.
INTERIOR: Cracks in drywall, plaster, or block, missing or loose hardware, peeling paint, mildew, smoke or water stains, insect or rodent damage.
PLUMBING: Leaking faucets or pipe connections. Inadequate or antiquated plumbing fixtures.
HVAC: Inadequate or poorly spaced equipment. Antiquated systems, high operating costs, furnaces or boilers in poor repair, rusted ductwork, etc.
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PC (Poor Condition, 76%-100%): Components are worn out. Repair or refinish is needed. Excessive deferred maint.

KUNIEDA FCS- ASSY

FAC ID: HI003 | BLDG TYPE: Assy | YEAR BUILT: 1980

FAC NUM: 2 | GROSS SQ FT: 8,086 | DATE OF SURVEY: 23-May-02

COMPONENT ROWS

	SYSTEM LIFETIME		EC (0-15%)	VG (16-24%)	GC (25-39%)	AC (40-59%)	FC (60-75%)	PC (76-100%)
EXTERIOR	60 YRS					X		
WINDOWS	15 YRS					X		
SITE	20 YRS					X		
PAINTING (EXTERIOR)	10 YRS					X		
ELECTRICAL	25 YRS					X		
FLOORING	20 YRS					X		
CEILING	15 YRS					X		
PAINTING (INTERIOR)	10 YRS					X		
INTERIOR	40 YRS					X		
PLUMBING	25 YRS					X		
HVAC	20 YRS					X		
ROOF	25 YRS				X	New gutters and D/S		

SIGNS OF POOR COMPONENT CONDITIONS

EXTERIOR: Cracked or loose mortar joints, loose siding, structural cracks, etc.
WINDOWS: Cracked, broken, require glazing, etc.
SITE: Drainage problems, inadequate parking for MEP/POV. Holes or cracks in pavement. Adequate security lighting, etc.
PAINTING: Peeling, cracking, etc.

ELECTRICAL: Defective, broken, inadequate wiring, antiquated or tarnished lighting fixtures or service equipment, not wired for 3 phase.
FLOORING: Cracks, sagging, worn or torn spots. Expansion joint separation, etc.
CEILING: Missing tiles, water stained, cracked or broken, etc.
INTERIOR: Cracks in drywall, plaster, or block, missing or loose hardware, peeling paint, mildew, smoke or water stains, insect or rodent damage.
PLUMBING: Leaking faucets or pipe connections. Inadequate or antiquated plumbing fixtures.
HVAC: Inadequate or poorly spaced equipment. Antiquated systems, high operating costs, furnaces or boilers in poor repair, rusted ductwork, etc.
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PC (Poor Condition, 76%-100%): Components are worn out. Repair or refinish is needed. Excessive deferred maint

IX. APPENDIX 3C KUNIEDA: SAFETY

ACTIVITY/AREA: SAFETY PROGRAM ADMINISTRATION
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)
GENERAL: *No evacuattion plan in men's washroom, engineer company office (corrected on the spot), Kitchen and storage cage areas.
*No MSDS for janitor closet.
* Paint stored in Janitor closet.
*Junk stored in mechanical room including a step ladder.
* medical storage fridge needs MSDS.
* No inspection Tag on fire extinguisher in supply cage.
* Mess closet poor housekeeping.
* Kitchen refrigerator does not seal properly but is used to store food.
*Fire suppression system in kitchen does not meet code, yet kitchen is still used for cooking unit meals.
* Propane stored in Kitchen storage room.
*Junlk stored around HVAC units.
* Floor jacks, hoists and lifting devices do not have current Load test certification.

ITEM	YES	NO	NA
1. Has the military or civilian leader appointed, in writing, a unit/facility safety representative/director/ officer? (AR 385-10)	X		
2. Do performance standards for military and civilian managers and supervisors include accident prevention and Occupational Health responsibilities as a rating element? (AR 385-10)	X		
3. Has each unit/activity published a standing operating procedure (SOP) that covers all safety responsibilities, and specifically includes areas, such as motor pools, field training, shop safety, and weapons safety. (AR 385-10)	X		
4. Are DA Form 285s (Accident Reporting Form) or DA 285-AB-R (Abbreviated Ground Accident Report Form) completed, as required, for each accident (Class D and above) and is it submitted through appropriate channels (Class C and above)?	X		
Are blank DA Form 285's available? (AR 385-40)	X		
5. Is there a DD Form 2272 (DOD Safety and Occupational Health Protection Program) poster on the unit activity board? (AR 385-10)		X	
6. Are the following Army regulations maintained on file in the official publications library? (AR 385-10)	X		
a. AR 385-10, Army Safety Program	X		

7. Are military/civilian leaders ensuring that safety related posters and other safety related materials are given the widest possible dissemination? (AR 385-10)			
8. Are employees in occupations that could be hazardous to their health (i.e. asbestos, noise) enrolled in the Medical Surveillance Program? (AR 40-5)			X
9. Are all military/civilian employees provided with appropriate personal protective equipment (i.e. respirators, ear plugs, safety glasses, gloves) and trained in its use? AR 40-5, AR 385-10)	X		
Is the training documented? (1910.132)		X	
10. Is there a "Hazard Communication Program"? (1910.1200)		X	
a. Is there a written internal policy available?		X	
b. Has documented initial training and subsequent hazard specific training (i.e. new processes involving chemicals, etc.) been conducted?		X	
c. Are all containers that contain chemicals marked/labeled as to their contents?		X	
d. Are Material Safety Data Sheets (MSDS) for each chemical present, available for employee review within the work place?		X	
e. Has an inventory listing been prepared of all chemicals stored/used in the workplace and is it readily available?		X	
11. Is there an installation/unit hazard abatement plan for all identified RAC 1 and RAC 2 hazards? (AR 385-10, TB MED 503)			X
12. Are eye and noise hazardous areas/equipment properly identified and labeled? (1910.133, 1910.145, AR 40-5, TB MED 501)	X		
13. Are hearing protective devices and safety eyewear provided for visitors to hazardous areas? (1910.132, AR 385-10)	X		

ACTIVITY/AREA: ELECTRICAL/MECHANICAL
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)
32. Mechanical room used for storage.

ITEM	YES	NO	NA
1. Are live parts of electrical equipment operating at 50 volts or more guarded against accidental contact by being enclosed in approved cabinets or other approved enclosures? (1910.303)	X		
2. Is installed electrical equipment free from recognized hazards likely to cause death, serious physical injury, or fire? (1910.303)	X		
3. Are outside power lines located:	X		
a minimum of 10 feet above sidewalks or platforms;	X		
12 feet over areas subject to vehicle traffic, other than trucks;	X		
15 feet for truck traffic; and	X		
a minimum of 18 feet over public streets, alleys, roads, and driveways? (1910.304)	X		
4. Are receptacles grounded by being installed in a complete metallic raceway or by a separate grounding conductor (3 wire) and all receptacles electrically connected to the grounding conductor (wire)? (1910.305)	X		
5. Does each electrical outlet box, pull box, junction box, and cabinet have an installed face plate, cover or canopy cover and are unused openings in cabinets and boxes effectively closed? (1910.305)	X		
6. Is water or moisture prevented from entering/accumulating within electrical cabinets, panel boards and junction boxes? (1910.305)	X		
Are weatherproof enclosures used in outside or wet locations? (1910.305)	X		
7. Is motor operated equipment (i.e. hand held motor operated tools, portable hand lamps, refrigerators, air conditioners, etc.) properly grounded with a three prong plug? (Note: Appliances protected by an approved system of double insulation need not b	X		
8. Are flexible cords and cables prohibited from use as substitute for permanent wiring of a structure, and prohibited from being run through holes in walls, ceilings, floors, doorways, windows or similar openings? (1910.305)	X		
9. Are personnel prohibited from wearing bracelets, watches, rings, or other metal objects when troubleshooting, repairing or calibrating electronic equipment? (1910.301)	X		
10. Are attachment adapter plugs with wire "pigtails" prohibited from being utilized? (NEC 70)	X		

11. Has a written Lockout-Tagout policy been established when work is performed on or near de-energized circuit parts or equipment in any situation where there is a danger of injury due to unexpected energization of the circuit parts or unexpected start	X		
12. Are floor fans that have large openings in the metal blade guard, properly covered or have a protective covering (i.e. cloth mesh) that limits the opening to less than 1/2"? (1910.212)	X		
13. Are electrical outlets/cords that expose live electrical parts removed from service? (1910.304)	X		
14. Have electrical outlets (outside/inside) that are within 6 feet of a wet area (i.e. sink) been converted to Ground Fault Circuit Interrupters (GFCI) outlets? (NEC 210-8)	X		
15. Are electrically operated tools properly maintained and replaced when worn, broken or deteriorated? (1910.242)	X		
16. Has electrical equipment (e.g. generators) grounding been accomplished and is there documentation of an initial ohm's testing utilizing a multimeter (0-5 volt reading)? (FM 10-69, FM 10-68)	X		
17. ELECTRICAL CABINETS:	X		
Are cabinets covers properly installed and in serviceable condition?	X		
Are circuit breakers properly labeled?	X		
Are all breakers inside the breaker box free of cracks and deterioration?	X		
Are electrical cabinet doors kept closed except for maintenance and/or servicing?	X		
Are warning signs placed on high voltage boxes and ground mounted transformers? (NEC)	X		
18. Have personnel who work with electrical equipment, circuits, or transmission lines been trained by qualified personnel in safety procedures and methods of first aid? (TB 385-4)	X		
Have electrical workers been taught cardiopulmonary resuscitation (CPR) standard techniques by a certified instructor?	X		
Is refresher training provided?	X		
19. Are entrances to buildings, rooms, and other guarded locations containing exposed live parts, locked and marked with conspicuous warning signs forbidding unqualified persons to enter? (1910.303)	X		
20. When working in an electrical (70 volts or higher) equipment shop, a Safety Board must be available to handle electrical emergencies. It must include	X		
(a) FM 21-11 First Aid for Solders"	X		
(b) emergency procedures	X		
(c) emergency telephone numbers	X		
(d) rope, halyard, 3/8 inch, 25 feet, NSN 4020-00-174-3031	X		
(e) flashlight, NSN 6230-00-264-8261	X		
(f) safety goggles, NSN 4240-00-052-3776	X		
(g) General purpose First Aid Kit NSN: 6545-00-922-1200	X		
(h) Rubber gloves,	X		
(j) safety hook, AWG #10 stranded, with clips and	X		
(k) a ground cable 30000 volts NSN: 8415-00-782-21 0/41/42/43	X		
(i) ground stick	X		
Are all of these items available? (TB 385-4)	X		

21. Are markings to include manufacturer's name/trademark and voltage/ current/ wattage ratings present on equipment and of sufficient durability to withstand the environment where present? (1910.303)	X		
22. (DATA PROCESSING SYSTEMS-DISCONNECTING MEANS) - Is a disconnecting means provided and readily accessible to the operator at the principle exit door to disconnect the power to all electronic equipment in data processing or computer rooms? (1910.306)	X		
23. Are all alternating current systems of 50 volts to 1000 bolts effectively grounded? (1910.304)	X		
24. Is the path to ground from circuits, equipment, and enclosures permanent and continuous? (1910.304)	X		
25. Has the facility grounding system been evaluated within the last 12 months to assure serviceability and compliance with the National Electric Code? (TB 385-4)	X		
26. Are boilers/furnaces properly labeled or identified? (TB 43-0151)	X		
27. Are boiler/furnace operating instructions available for use and inspection? (TB 43-0151, ASME	X		
28. Are gas/fuel lines located in mechanical room labeled or identified? (TB 43-0151, ASME)	X		
29. Are emergency shut off valves for gas/fuel lines identified? (TB 43-0151, ASME)	X		
30. Are guards/shields, to prevent worker entanglement, properly installed on motors, pumps, gears, belts, and fans?	X		
31. Is the mechanical room adequately ventilated to allow for proper boiler or furnace operations?	X		
32. Is the mechanical room clean, free of leaks/spills and other debris, as well as stored items?	X		
33. Are the pressure shut-off valve and/or pressure relief valves on air compressors, boilers, water heaters, and other such equipment functional? (TB 43-0151)	X		

ACTIVITY/AREA: FIRE SAFETY/EGRESS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)
6. Done annually, not monthly.
9. Mechanical room used for storage.
10. Missing evacuation plans-admin building: men's washroom, engineer unit office. Assy: kitchen storage, mess storage, supply cages.
13 Portable extinguishers in vehicles.

ITEM	YES	NO	NA
1. Are all rags, waste, etc., soiled by combustible or flammable materials kept in tightly closed metal containers for daily disposal? (TB 55-1500-204-25)	X		
2. Are all sleeping areas equipped with operational smoke detectors for early warning of smoke and/or fire? (NFPA Life Safety Code 101)			X
3. Are "No Smoking in Bed" signs posted in the billets? (AR 420-90)			X
4. Is excess dried vegetation around buildings/bleachers/fences kept to minimum? (1910.141)	X		
5. Are emergency lights installed and operating properly? (1910.36)	X		
6. Are all fire extinguishers, except pressurized water extinguishers, being hydrostatic tested every twelve years? Five years for pressurized water extinguishers? (1910.157)	X X		
7. Are posted "No Smoking" signs enforced by employees/supervisors? (AR 420-90).	X		
8. Are fire extinguishers hung on brackets or mounted in unlocked cabinets with the top of the extinguishers not more than: - 5 feet above the floor for extinguishers with a gross weight at or below 40 pounds; - 3 above the floor for extinguishers with a gross weight above 40 pounds and - not being used as door stops? (1910.157 and NFPA 101)	X X X X		
9. Is storage of any type prohibited in furnace or boiler rooms, transformer rooms or vaults, in water heater closets, or mechanical equipment rooms. (AR 420-90)		X	
10. Is a fire plan available and posted for buildings housing 10 or more persons and/or any hazardous operation? (AR 420-90)	X		

11. Are fire extinguishers inspected monthly? (1910.157)		X	
12. Is flammable storage of items in "office occupancies" prohibited, except for the amount required for maintenance and operation of building and operation of equipment? Is it stored in a closed metal container or safety can or in an inside storage room?	X X		
13. Have employers distributed portable fire extinguishers for use by employees so that the travel distance for employees to any extinguisher is never greater than: (a) Class A Fire - 75 feet (b) Class B Fire - 50 feet (c) Class C Fire 50-75 feet (d) Class D (combustible metal powers, flakes, shavings, etc.) - 75 feet (1910.157)?		X X X X X	
14. Are portable fire extinguishers using carbon tetrachloride or chlorobromomethane extinguishing agents prohibited from use? (1910.157)	X		
15. Where portable fire extinguishers have been provided for employee use in the workplace, has an educational program been provided (both initially and annually) to familiarize employees with the general principles of fire extinguisher use and hazards involved with incipient stage fire fighting? (1910.157)		X	
16. Are extinguishers in the proximity of a hazard located so as to be accessible in the presence of a fire without undue danger to the operator (75 ft for normal hazard occupancy and 50 ft for high hazard occupancy)? (1910.157)	X		
17. Is material stacked such that the minimum vertical clearance between emergency sprinklers (interior) and material(s) below is at least 18 inches? (1910.159)	X		
18. Is there an established procedures for sounding emergency alarms in the workplace? (NOTE: Direct voice communication is acceptable when there are 10 or fewer employees) (1910.165)	X		
19. Are alarm systems maintained in operating condition, except when undergoing repairs or maintenance? (1910.165)	X		
20. Are gas fired devices, which are used to generate heat for comfort such as furnaces and space heaters, vented to an external atmosphere to avoid the accumulation of combustible/noxious products of decomposition? (NFPA 54)	X		

MEANS OF EGRESS

1. For multi-story buildings that require more than one exit, are the exits remote from each other and free of clutter? (1910.37)			X
2. In hazardous areas, or where employees may be endangered by the blocking of any single means of egress due to fire or smoke, is there at least two means of egress remote from each other? (1910.36)	X		
3. Are exits and the way of approach and travel from exits maintained so that they are unobstructed and are accessible at all times? (1910.36, 1910.37)	X		
4. Do all exits discharge directly to the street or other open space that gives safe access to a public way? (1910.37)	X		
5. Are all exits unlocked or unfastened so that free escape is not prevented? (1910.36)	X		
6. Has each emergency light been tested monthly for minimum of 30 seconds and annually for a 1 1/2 hour duration? (NFPA 101)		X	
7. Can all exits be reached without going through a kitchen, storage room, rest room, closet, or similar space subject to being locked? (1910.37, NFPA 101)	X		
8. When exit doors are locked, can the door be unlocked from the inside without the use of a key or special knowledge or effort? (NFPA 101)	X		
9. Are horizontal sliding or vertical doors, used as exits in lieu of side hinged swinging doors, secured in the full open position when the area is occupied? (NFPA 101) Is there a durable sign on or adjacent to the door indicating "This door to remain open when building is occupied"? (NFPA 101)			X X
10. Are doors from a room to an exit, or to a way of exit access, of the side-hinged, swinging type? Does the door swing in the direction of exit travel for rooms with more that 50 occupants? (1910.37)	X X		
11. Is the minimum width of any way of exit access no less than 28 inches? (1910.37)	X		
12. Are all exits that are not readily visible marked by a readily visible exit sign? (1910.37)	X		

ACTIVITY/AREA: HOUSEKEEPING
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)
1. HVAC Area: recycling cans, refrigerator in Kitrchen unservicable, mechanical room used for storage.
3.Many signs are faded, in particular, those in the motor pool area.

ITEM	YES	NO	NA
1. Are all places of employment, passageways, storerooms, and rooms kept clean and orderly and in a sanitary condition? (1910.22)		X	
2. Are aisles and passageways kept clean and unobstructed with no carpet snags, electrical cords, or telephone cords extending across walkways, creating slip, trip, and fall hazards? (1910.22)	X		
3. Have warning signs on buildings and other locations been kept in good condition and not allowed to deteriorated beyond recognition? (NFPA 30A)		X	
4. Are guards or handrails available for stairways having more than four risers? (1910.23)	X		
5. Do the steps have a slip-resistant material that is functional? (1910.24)	X		
6. Has Preventive Medicine been contacted if any of the items listed below appear to exist? (AR 40-5)			X
a. Inadequate lighting			X
b. High mold content in the air			X
c. Loud noises			X
d. Inadequate ventilation			X
7. If personnel wear respirators for any jobs, is there a written Respiratory Protection Program and does it contain the following:			X
a. Written standing operating procedures for proper selection, use and care of respirators?			X
b. Are respirators/filters selected on the basis of employee hazards and does the equipment meet ANSI standards?			X
c. Are employees trained in the proper use of respirators, and have they been medically qualified (pulmonary function test and fit tested by a qualified instructor)?			X
d. Are respirators regularly cleaned and disinfected and stored in a convenient, clean, and sanitary location?			X
e. Are respirators routinely inspected for worn or deteriorated parts?			X
f. Do employees receive yearly pulmonary function and fit testing from a qualified instructor? (AR 385-10, 1910.134, and AR 11-34)			X
8. Does the upstairs storage area have the maximum weight capacity sign posted? (1910.22)			X
9. Is warm water available in each lavatory? (1910.141)	X		
10. Are the outlets for nonpotable water (e.g. industrial or fire fighting purposes) posted or otherwise marked in a manner that will clearly indicate the water is unsafe and not to be used for drinking or washing of the person? (1910.141)			X

11. Is hand soap or similar cleansing agents provided? Are individual hand towels or selections thereof, of cloth or paper, warm air blowers, or clean individual selections of continuous toweling provided? (1910.141)	X X		
12. Are employees forbidden from consuming food or beverages in a toilet room or in any area exposed to toxic materials? (1910.141)	X		
13. Have all cracked windows /and or leaking roof(s) (if there were any) been fixed so that no water is allowed into the building to create a slipping hazard? (1960.9)	X		
14. Are upstairs storage areas equipped with railings and toe boards? They must have railings on all sides except those with ladders/stairs, etc. (1910.23)			X
15. Is approved head protection provided, where necessary, to personnel for the protection of heads from impact and penetration from falling and flying objects and from limited electric shock and burns? (1910.135)	X		
16. Are covers and/or guardrails provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.? (1910.22)			X
17. Is every stairway floor opening guarded by a standard railing on all exposed sides except at entrance to stairway? (STANDARD: A smooth-surfaced top rail throughout the length of the railing at a vertical height of 42 inches nominal from the upper surface of top rail to the floor, platform, runway, or ramp level; an intermediate rail approximately halfway between the top rail and the floor, platform, runway, or ramp, and posts.) (1910.23)	X		
18. Is every floor hole into which persons can accidentally walk, guarded with a standard guard railing and with a standard toe board? (1910.23)			X
19. Do fixed stairways have a minimum width of 22 inches? And, are all treads reasonably slip-resistant and is the rise height and tread width uniform throughout any flight of stairs? (1910.24)	X X		

ACTIVITY/AREA: LADDERS
INSPECTOR:

NOTE: All "NO" answers require a comment at the end of the checklist for the area.

COMMENTS: (Include item number and location for each comment. Add extra pages, if necessary.)

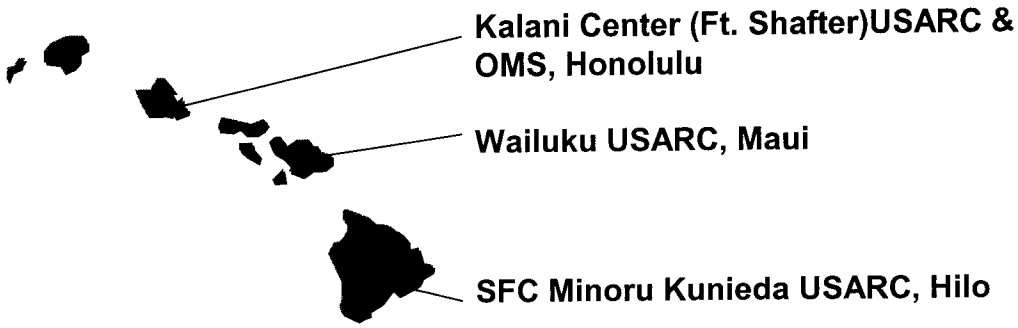
ITEM	YES	NO	NA
1. The maximum length for portable wood ladders shall be:	X		
step-ladders 20 feet;	X		
single straight ladders 30 feet;	X		
two section extension ladders 60 feet;	X		
sectional ladders 60 feet;	X		
trestle ladders 20 feet;	X		
platform step-ladders 20 feet;	X		
painter's step-ladders 12 feet; and	X		
mason's ladders 40 feet. (1910.25)	X		
Do the ladders in this facility meet these requirements?	X		
2. The maximum length for portable metal ladders shall be:	X		
single straight ladders 30 feet;	X		
two section extension ladders 48 feet;	X		
over two section extension ladders 60 feet;	X		
step-ladders 20 feet;	X		
trestle ladders 20 feet; and	X		
platform step-ladders 20 feet. (1910.26)	X		
Do the metal ladders in this facility meet these requirements?	X		
3. Step-ladders shall be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in a open position. (1910.25, 1910.26)	X		
Do the step-ladders in this facility meet these requirements?	X		
4. Are ladders maintained in good condition, and defective ladders withdrawn from service?	X		
Are rungs free of grease and oil? (1910.25)	X		
5. Are only portable ladders that have nonconductive siderails used when working with live electrical circuits? (1910.333)	X		
6. Are all portable ladders placed to prevent slipping, or lashed or held in position? (1910.25)	X		
7. Are all portable ladders equipped with non-slip bases when there is a hazard of slipping? (Note: Non-slip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used upon oily, metal, concrete, or slippery surfaces.) (1910.25)	X		
8. Do the portable ladders used to gain access to a roof, extend at least 3 feet above the point of support, at eaves, gutter, or roof line? (1910.25)	X		
9. Are ladder stands and work platforms capable of supporting at least four times the design work load? (1910.29)	X		
10. Is the standard (work platform) (4 inch nominal) toe-board installed for work levels 10 feet or higher above the ground or floor? (1910.29)			X
11. For work levels (work platforms) 10 feet or higher above the ground or floor, is a guardrail of 2 x 4 inch nominal, or the equivalent, installed no less than 36 inches or more than 42 inches high (with a mid-rail when required)? (1910.29)			X
12. Are wheel/casters (work platforms) provided with a positive wheel and/or swivel lock to prevent movement? (1910.29)			X
13. Are wooden ladders free of sharp edges and splinters? (1910.25)			X

U.S. Army Facility Engineer Group
416th Engineer Command
10 S. 100 South Frontage Road
Darien, IL 60561

Project Plan FY02-1:

Environmental Compliance Assessment (ECAS)
Safety Assessment
Facility Condition Survey (FCS)

For



-9th Regional Support Command-
Fort Shafter, Hawaii

Prepared by:
Facility Engineer Center – Southwest
2420 Liscum Rd. Suite 63
Ft. Sam Houston, TX 78234

06 April 2002

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SITUATION

I. Environmental Compliance Assessment System (ECAS):

In 1991, the FORSCOM Engineer designated the 416th ENCOM FETDA (now United States Army, Facility Engineer Group (USAFEG) as its Executive Agent for the Environmental Compliance Assessment Army Reserve (ECAAR) Program. In 1993, FORSCOM further extended environmental responsibilities to the United States Army Reserve Command (USARC) by delegating authority for other environmental programs to include the newly named Environmental Compliance Assessment System (ECAS). The former ECAAR program is now referred to as Reserve-ECAS. The goal of ECAS is to assist the RSC commander, the reserve center commander, and the facility manager in achieving and maintaining compliance with federal, state, and local environmental and safety laws and regulations.

II. Facility Condition Survey (FCS):

The Facility Condition Survey is the first step in the Life Cycle Planning process. The USARC directed the USAFEG to compile data on the physical and functional condition of all it facilities using this process. The process is a method of estimating the remaining life in building components. The remaining life is the estimated period during which improvements continue to contribute to the building's life. The Facility Life Cycle Planning methodology uses formulas to determine the property's effective age versus its actual age. For example, a typical roof is designed to last 25 years, but maintenance can extend or decrease its life. The formulas are based on the property's physical depreciation at the time of the facility survey. The surveys are an important step in deciding whether a building should be replaced, renovated, repaired or modernized. The facility condition surveys will provide a method to project future monetary requirements. (Appendix B – Facility Condition Survey Worksheet)

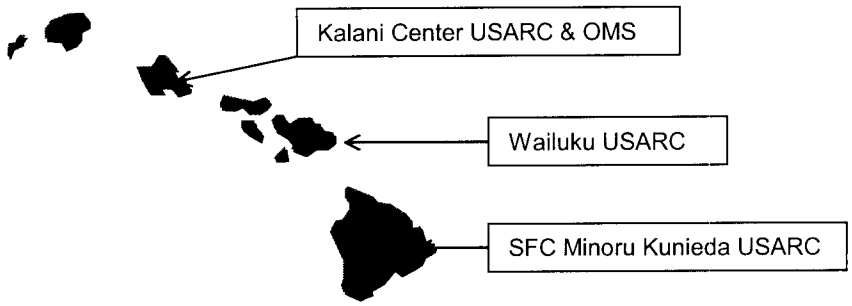
III. Safety Assessment:

This activity is a multi-part, safety checklist for evaluation of US Army Reserve (USAR) facilities. It is structured as a series of independent checklists that may be used to conduct a screening evaluation of the safety status for USAR facilities. Qualified USAFEG Teams use these checklists to evaluate individual facilities without having to acquire specialized safety training. (Appendix A – Safety Assessment Checklist)

MISSION

The FEC-SW Project Team will conduct an Environmental Compliance Assessment (ECAS), Safety Assessment and a Facility Condition Survey (FCS) of the following 9th RSC, US Army Reserve Centers (USARCs). These assessments will provide a detailed "snapshot" of current conditions at the respective centers.

- **Kalani Center (Ft. Shafter, Honolulu) USARC & OMS on 20-21 May 2002**
- **Wailuku (Maui) USARC on 22 May 2002**
- **SFC Minoru Kunieda (Hilo) USARC on 23 May 2001**



- Pre-Assessment Activities Phase --- includes the initial coordination between the Facility Engineer Center – Southwest (FEC-SW) and the RSC POC, Reserve Center Commander, and the Facility Manager to ensure that all administrative requirements are coordinated.

- Site Assessment Phase --- At each USARC, the Project Team will conduct an in-briefing, interview personnel, review records, tour facilities, inspect equipment, and evaluate procedures and practices in order to make a verifiable and quantifiable assessment of each facility. In addition, the Project Team will initiate actions and identify Best Management Practices (BMPs) to help facility managers meet regulatory, Army and 9th RSC standards. The Team will conduct an oral outbrief to the facility manager at the completion of the assessment and provide a written summary of findings, noting in particular, any Class I findings. The team will present a consolidated outbrief and written summary of findings to the 9th RSC DCSENG at the end of the week.

- Post Assessment Activity Phase --- The Project Team will formally compile all data and deliver to FEC-SW, HQ a draft ECAS/Safety/FCS Findings Report not later than 30 days after completion of the site visit. The ECAS data and report will be limited to the format provided by the ECAS program, V1.8. The Safety report shall be limited to the findings. Photos will illustrate ECAS and Safety deficiencies only.

- Review Phase --- FEC-SW, HQ will deliver the final ECAS/Safety/FCS Findings Report and ECAS data to MAJ Losey, 9th RSC DCSENG within 60 days after completion of the site visit.

EXECUTION

A. CONCEPT OF THE OPERATION

(1) Environmental Compliance Assessment System (ECAS): The Project Team will conduct an extensive assessment, but limited by time and resources, may not identify all cases of noncompliance. The Team will also provide assistance to apply on-the-spot corrective actions (where possible) to findings, many of which may be administrative in nature. Any Class I ECAS or significant safety findings shall be reported immediately to the 9th RSC DCSENG.

(2) Facility Condition Survey (FCS): The Project Team will survey the buildings and estimate the remaining life of building components (see Appendix B – Facility Condition Survey Worksheet). The Team will identify component replacements and not maintenance repairs. For example, replacing 20 square feet of ceiling tiles due to a water leak is maintenance versus installing a new ceiling, which is a component replacement.

(3) Safety Assessment: The Project Team will customize the safety checklist (see Appendix A – Safety Assessment Checklist) to focus on the areas applicable to each facility. The safety assessment is intertwined with the ECAS. Safety noncompliance may also be environmental noncompliance and vice-versa. In addition, it is not uncommon for deteriorating structural components to pose a safety hazard as well. The team will thoroughly tour each facility and identify checklist items that pose an immediate or pending risk or hazard.

B. COORDINATING INSTRUCTIONS

(1) Special Instructions for 9th RSC DCSENG and Facility Managers: 9th RSC will make advance contact with each Facility Manager to inform them of the upcoming site visit upon receipt of this plan. Recommend providing a copy of this OPLAN, deliver a pre-visit letter such as the example at Appendix C – Individual Facility Pre-Visit Letter and a copy of the ECAS pre-visit questionnaire (that will be delivered under separate cover) to each Facility Manager no later than May 3, 2002. 9th RSC will coordinate rendezvous times for the Project Team to meet the Facility Managers. This is typically done at the start of the duty day based on the travel schedule shown in paragraph B.(2). 9th RSC will provide the FEC-SW Project Team driving directions from the island airports to each facility; the names, voice, fax, cell numbers and e-mail address of each Facility Manager or representative no later than May 3, 2002. Once formal coordination has been made between the FEC-SW HQ and 9th RSC DCSENG, then the Project Team will make final calibrations directly with the Facility Managers. 9th RSC DCSENG will identify the primary and alternate points of contact on staff that the Project Team will need to contact once on site, throughout the visit and outbrief at the conclusion of the visit.

(2) Project Schedule: The Project Team has established the following travel itinerary subject to change, as mission conditions require. Times, if shown, are local based on respective location.

DATE	Saturday 18-May	Sunday 19-May	Monday 20-May	Tuesday 21-May	Wednesday 22-May	Thursday 23-May	Friday 24-May	Saturday 25-May
TRAVEL	From home station to Honolulu	To 9th RSC HQ and Kalani USARC	To 9th RSC HQ and Kalani USARC	To 9th RSC HQ and Kalani USARC	Morning: to Maui-Wailuku USARC	Morning: to Hilo-Kunieda USARC Evening: return to Honlulu	To 9th RSC HQ	From Honolulu to home station
ACTIVITY	Travel Day	Project Team internal planning. Interface with 9th RSC POC and Facility Managers.	Conduct ECAS/Safety/FCS @ Kalani Center USARC & OMS	Conduct ECAS/Safety/FCS @ Kalani Center USARC & OMS	Conduct ECAS/Safety/FCS @ Wailuku USARC	Conduct ECAS/Safety/FCS @ Kunieda USARC	Project Team internal planning. Interface with 9th RSC POC. Prepare and deliver summary report of findings.	Travel Day
LODGING	Honolulu	Honolulu	Honolulu	Honolulu	TBD-Maui	Honolulu	Honolulu	Home
TRANSPORTATION	Rental car	Rental car	Rental car	Rental car	Rental Car	Rental car	Rental car	POV

(3) Project Team: The Project Team consists of the following individuals from the FEC-SW. The Project Team will carry all necessary equipment to accomplish the mission.

LTC David M. Wilkins
Team Leader
San Francisco FET
120 Mini Drive
Vallejo, CA 94591
Office: 707-558-1054
Fax: 707-558-1716
E-mail: david.wilkins@us.army.mil

CPT Jeffrey Hartsell
Asst. S-3, Headquarters
Facility Engineer Center – Southwest
2420 Liscum Rd. Suite 63
Ft. Sam Houston, TX 78234
Office: 210-295-9871
Fax: 210-221-2057
E-mail: jeffrey.hartsell@us.army.mil

SERVICE SUPPORT

(1) **Lodging:** May 18-21 and 23-25 at the Hale Koa Hotel, Honolulu. May 22, TBD, Maui.
(2) **Air Travel:** to and from home station and between islands as provided by SATO, FT. McCoy
(3) **Ground Transportation:** as provided by SATO, FT. McCoy
(4) **Uniform and Equipment:** BDU. The Project Team will carry digital camera and other special equipment. Facility Managers will provide means for roof access at their facility, office space for the project team to work from, printer access and office supplies as needed. (9th RSC, DCSENG is asked to provide office space for the project team to work from, printer access, high speed Internet access and office supplies as needed.

COMMAND AND SIGNAL

A. SIGNAL
Kalani Facility Manager:
Wailuku Facility Manager:
Kunieda Facility Manager:
9th RSC DCSENG, POC1:
9th RSC DCSENG, POC2:
9th RSC DCSENG, POC3:

The FEC-SW Project Team:
LTC David M. Wilkins
Home: 76 Narragansett Court Vallejo, CA 94591
Office-Direct: 415-925-6972
Fax: 415-461-5591
Mobil: 415-717-9713
E-fax: 801-729-0886
E-mail: dwilkins@Coleman-consulting.com

CPT Jeffrey Hartsell
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Facility Engineer Center – Southwest
2420 Liscum Rd. Suite 63
Ft. Sam Houston, TX 78234
Office: 210-295-9871
Fax: 210-221-2057
E-mail: jeffrey.hartsell@us.army.mil

B. COMMAND

(1) **Chain of Command:**
Any questions regarding this plan should be directed to:
LTC Julius Huff, Deputy Director, FEC-SW
Phone Number: (903) 891-6024
Email Address: jhuff1@medus.jnj.com

Appendix A – Safety Assessment Checklist

CHECKLIST SUMMARY DESCRIPTION: Checklists are alphabetically listed by major subject area. A brief description of the material covered by each checklist is provided below. The Project Team will customize the checklists to eliminate subject areas that obviously do not apply to the specific USAR facility being evaluated. Any "NO" answers on any checklist will include a comment in the comment section of that particular checklist.

ADMINISTRATIVE: Written programs, documentation, training, etc., necessary for administration of a unit/facility safety program.

BATTERY SHOP: Acid handling, ventilation, protective clothing, and operational precautions applied to battery servicing and repair.

BRAKE AND CLUTCH REPAIR/TIRE SERVICING MULTI-PIECE WHEELS/ ASBESTOS: Protective equipment, waste handling, hazard posting, and operational precautions applied to exposure to asbestos material and multi-piece wheels during brake and clutch repair and tire servicing.

CHEMICAL STORAGE: Labeling, ventilation, fire protection, storage, and training for hazardous chemical storage.

COMPRESSED GAS CYLINDERS: Storage, equipment protection, leak detection, and operational cautions for compressed gas cylinders and tanks.

CONFINED SPACE: Cleaning, testing, ventilation, protective equipment, approvals, tools, training, rescue procedures, and operational precautions for entry into confined spaces.

ELECTRICAL/MECHANICAL: Grounding, high voltage, waste, lightning protection, and safety procedures for use with electrical and mechanical facilities equipment.

FIRE SAFETY/EGRESS: Flammable cabinet usage, signs, appliance usage, vehicle fueling, spill cleanup, fire extinguisher requirements, and egress for fire safety and personnel protection.

Appendix B – Facility Condition Survey Worksheet

FAC ID: ____ BLDG TYPE: ____ YEAR BUILT: ____

FAC NUM: ____ GROSS SQ FT: ____ DATE OF SURVEY: ____

COMPONENT ROWS

	SYSTEM LIFETIME		EC (0-15%)	VG (16-24%)	GC (25-39%)	AC (40-59%)	FC (60-75%)	PC (76-100%)
EXTERIOR	60 YRS							
WINDOWS	15 YRS							
SITE	20 YRS							
ELEVATOR	15 YRS							
PAINTING (EXTERIOR)	10 YRS							
ELECTRICAL	25 YRS							
FLOORING	20 YRS							
CEILING	15 YRS							
PAINTING (INTERIOR)	10 YRS							
INTERIOR	40 YRS							
PLUMBING	25 YRS							
HVAC	20 YRS							
ROOF	25 YRS							

SIGNS OF POOR COMPONENT CONDITIONS

EXTERIOR: Cracked or loose mortar joints, loose siding, structural cracks, etc.
WINDOWS: Cracked, broken, require glazing, etc.
SITE: Drainage problems, inadequate parking for MEP/POV. Holes or cracks in pavement. Adequate security lighting, etc.
PAINTING: Peeling, cracking, etc.
ELECTRICAL: Defective, broken, inadequate wiring, antiquated or tarnished lighting fixtures or service equipment, not wired for 3 phase.
FLOORING: Cracks, sagging, worn or torn spots. Expansion joint separation, etc.
CEILING: Missing tiles, water stained, cracked or broken, etc.
INTERIOR: Cracks in drywall, plaster, or block, missing or loose hardware, peeling paint, mildew, smoke or water stains, insect or rodent damage.
PLUMBING: Leaking faucets or pipe connections. Inadequate or antiquated plumbing fixtures.
HVAC: Inadequate or poorly spaced equipment. Antiquated systems, high operating costs, furnaces or boilers in poor repair, rusted ductwork, etc.
ROOF: Leakage, missing shingles, or tiles, sagging or decaying roof structures, damaged trusses, plugged roof.

CONDITION RANKINGS

EC (Excellent Condition, 0%-15%): Items that can normally be repaired or refinished, have been corrected or replaced .
VG (Very Good Condition,16%-24%): Items well maintained, many repaired, refinished or replaced.
GC (Good Condition 25%-39%): No obvious maintenance required, but neither is everything new.
AC (Average Condition, 40%-59%): Some evidence of deferred maintenance and normal obsolescence with age.
FC (Fair Condition, 60%-75%): Evidence of badly worn components. Much repair is needed.
PC (Poor Condition, 76%-100%): Components are worn out. Repair or refinish is needed. Excessive deferred maint.

Appendix C – Individual Facility Pre-Visit Letter

MEMORANDUM FOR: Facility Manager - Kunieda USARC-Hilo, HI or Wailuku USARC-Maui or Ft. Shafter USARC, Honolulu, HI

SUBJECT: Confirmation of Scheduled Visit by FEC-SW Facility Engineer Team

1. This confirms our telephone conversation of DDMMYYYY regarding our scheduled visit to Ft. Shafter May 20-21, 2002 or Wailuku USARC May 22, 2002 or Kunieda USARC May 23, 2002 to conduct an Environmental Compliance and Safety Assessment and a Facility Condition Survey at your facility.

2. We will conduct an in-brief at XXXX hrs on MMDD in TBD with you. Let us know if there will be any other key contacts in attendance such as subject matter experts or those on appointment orders for ECAS or Safety. Please complete the attached pre-visit questionnaire on your ECAS program. Please review the Safety Checklist subject areas. We will review your responses and discuss our approach at the in-brief.

3. After the in-brief, be prepared to host a tour of your facility and allow team members access to the various rooms and areas. After the initial hosted tour, we can work independently as long as all areas are accessible. For the FCS, please provide a list of any major component deficiencies or discrepancies with the facilities, i.e., plumbing, air conditioning, security systems, roofs and walls, deteriorating structural components, hazard waste facilities, etc. We will also be reviewing any existing work orders to avoid redundancies in reporting and to verify any effort being expanded to correct major component problems. For the ECAS, we will tour the entire site, but will focus on the OMS and items noted in the questionnaire. For the Safety portion, we will tour the entire site emphasizing the applicable checklist areas. Our assessment and recommendations on the ECAS, Safety and FCS will be subsequently reported to the 9th RSC DCSENG by formal report. Other information that we would be helpful is:

   a. List of Units that occupy the USARC
   b. Appointment orders for Environmental, Energy, Safety, Building Manager

4. We will out-brief you after the assessments are completed. If you have any questions, please contact me at (415) 717-9713 or email me at:
   dwilkins@coleman-consulting.com
   david.wilkins@us.army.mil

David M. Wilkins
MAJ, EN, USAR
Team Leader

Cc: Deputy Director-Operations, FEC-SW
9th RSC DCSENG

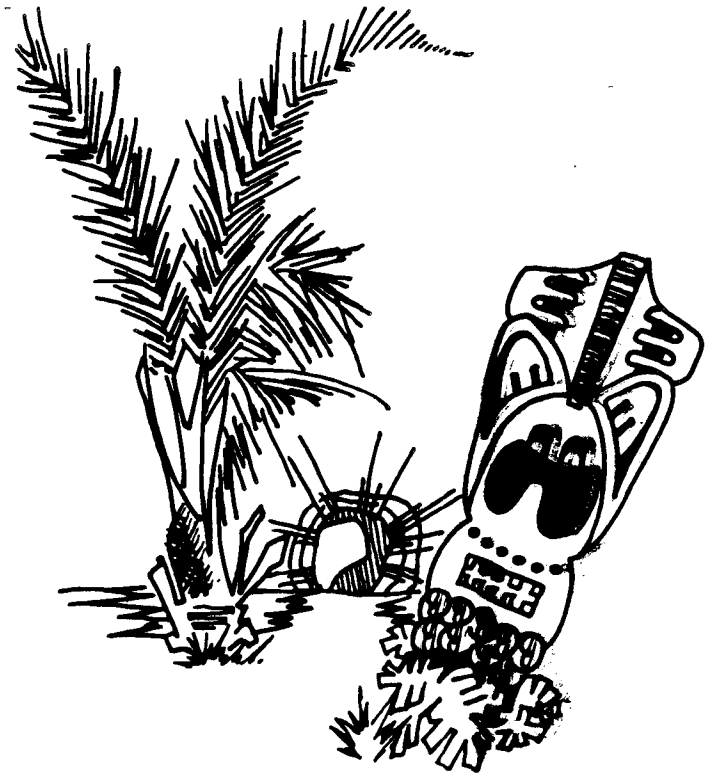
US Army Corps
of Engineers

DESIGN ANALYSIS

TITLE OF PROJECT:
FY95 OMAR PKG O-2
REPLACE WASHRACK, INSTALL OIL/WATER SEPARATOR AND VENTILATION FANS

LOCATION:
U.S. ARMY RESERVE CNTR, HILO, ISLAND OF HAWAII

DATE:
28 APR 95
FINAL SUBMITTAL



DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

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5.	LIFE SAFETY AND FIRE PROTECTION	NOT USED
6.	STRUCTURAL DESIGN ANALYSIS	6-01 to 6-02
7.	MECHANICAL DESIGN ANALYSIS	7-01 to 7-01
8.	ELECTRICAL DESIGN ANALYSIS	8-01 to 8-06
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C	ARCHITECTURAL COMPUTATIONS	NOT USED
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SECTION 1
GENERAL

1.1 Purpose and Scope

This project is to provide a new washrack facility, paved motorpool parking and access road, motorpool lighting, gravel parking lot, and AC pavement extension (near Assembly Bldg) for the USARC in Hilo, Hawaii.

1.2 Scope and Design Clarifications

The scope of work for this project was determined via meetings and phone conversations with the User.

1.3 References

1.3.1 CEPOD-ED-DC MFR, subject: Minutes of meeting for FY95 OMAR Pkg O-2, Replace Washrack, Install Oil/water Separator and Ventilation Fans, USARC, Hilo, Island of Hawaii, 30 Dec 94.

1.3.2 CEPOD-ED-DC MFR, subject: Site visit for FY95 OMAR Pkg O-2, Replace Washrack, Install Oil/water Separator and Ventilation Fans, USARC, Hilo, Island of Hawaii, 27 Dec 94.

SECTION 2
CIVIL DESIGN ANALYSIS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

2.1 General

2.1.1 Purpose

The purpose of the project is to construct a new vehicle washrack including recycling equipment to treat the gray water for reuse by the washrack facility. The new washrack will replace an existing washrack which drains, without adequate treatment, into the adjoining soil. Also included are installation of new air conditioning to a portion of the existing Assembly Building, removal of the existing grease rack, grading, paving, and lighting of a new motorpool (Govt Option 1) and grading and paving a wider entrance area (Govt Option 2).

2.1.2 Scope of Work

2.1.2.1 Primary facility

The primary facility consists of a new 50' x 20' concrete washpad with roof covering. (The final concrete pad size was enlarged by structural [to provide necessary weight] and is not necessary for our washpad. This 1' X 20' concrete section on each end of the washpad slopes away from the wash pad and is not covered.)

2.1.2.2 Support facilities

2.1.2.2.1 Utilities

2.1.2.2.1.1 A 3/4" water supply line is required to provide makeup and initial startup water supply for the recycling system

2.1.2.2.1.2 Sanitary sewer--no sanitary sewer system is required because the recycling system does not require discharge of the graywater.

2.1.2.2.1.3 Recycling equipment and items including trench drain, piping, sediment collection tanks, sump with pump, 4 bag pressurized filter, RGF Model XL water treatment equipment, 2 pressure washers (1 with steam capability), and 2 self dumping dewatering filters provide treatment and storage of the graywater produced from washrack.. This recycling system allows unlimited reuse of the graywater.

2.1.2.2.2 Site improvements and demolition

2.1.2.2.2.1 Removal of existing improvements including demolition and removal of existing grease rack, removal of existing concrete headwall and 12" drain line and existing AC pavement as required.

2.1.2.2.2.2 Site improvements including regrading the existing grassed areas and providing new AC pavement or concrete pavement (for slopes greater than 10%) in parking and roadway areas and shotcreting side slope transitions in the vicinity of the newly paved areas.

2.1.3 References

2.1.3.1 TM 5-813-5/AFM 88-10, Ch. 5, Water Supply: Water Distribution System, dated June 1979.

2.1.3.2 TM 5-820-4/AFM 88-5, Ch. 4, Drainage for Areas Other than Airfields, dated October 1983.

2.1.3.3 TM 5-822-2/AFM 88-7, Ch. 5, General Provisions and Geometric Design for Roads, Streets, Walks, and Open Storage Areas, dated April 1977.

2.1.3.4 TM 5-803-5, Installation Design, dated 1 March 1981

2.1.3.5 EIRS Bulletin 81-05, Engineering and Design, Dimensions for Typical POV Parking Areas.

2.1.3.6 EIRS Bulletin 82-03, Engineering and Design, Grading for Typical POV Parking Areas.

2.2 Project Area

2.2.1 Location

The project is located in Hilo along West Lanikaula Street, adjacent to the University of Hawaii at Hilo campus. The facility encompasses an area approximately 3.2 acres in size and serves as the Engineering Combat Company Unit. The Reserve Center functions as combat/construction engineer training and a vehicle and equipment maintenance parking facility.

2.2.2 Existing Conditions

According to as-built drawings, the existing USARC washrack consists of a concrete pad with a sand trap in the middle. The sand trap is a concrete structure filled with sand with inlet top and inverted drain out via sanitary sewer piping which discharges through a headwall to the adjacent ground surface. Use of the existing washrack would violate current federal EPA laws as well as State of Hawaii Dept of Health laws and regulations. Therefore, the existing washrack is not currently being used.

2.3 Siting

2.3.1 Washrack siting

The washrack was sited based on User requirements (discussions and correspondence with Capt Takishita (Hilo USARC)). Capt Takishita requested that the washrack be placed in the north corner of the USARC facility in the existing gravel parking area. The new motorpool, gravel parking area, and pavement extension (near Assembly Bldg) was also sited by Capt Takishita.

Capt Takishita requested that the entire available area (10' from the existing fence line) be paved for a new motorpool and roadway, except for a 30' x 70' gravel parking area for tracked vehicles.

2.4 Graywater Treatment Selection:

It was determined that a recycling system would be used in lieu of the normal sedimentation basin with oil/water separator system because of the cost limitation on this project of $300,000. A similar washrack was constructed at the USARC facility on Maui with a sedimentation basin and rope oil skimmer and discharge into the County sewer. The Maui system could be done under the statutory limit because that facility was not covered.

Since this project is located in Hilo, where the rainfall is significantly more than that at Maui, it was determined that covering the facility would be less expensive than an attempt to treat the high amount of stormwater runoff prior to it leaving the USARC property. There are no drainage structures to drain storm drainage bypass waters into and the runoff eventually drains into Wailoa River and then into Hilo Bay (Class AA Waters). The roof cover, plus the added expense of a sanitary sewer system (force main) to the road, plus the cost of a long gravel access road to the washrack resulted in the added expenses which resulted in a need to find a system to take care of the graywater significantly less expensive than the traditional sedimentation basin and rope oil skimmer/sewer discharge system.

2.5 Washrack Design Requirements: The washrack design was based on a sample design provided by RGF Environmental Systems for their DMSL High Solids System with Center Clean out Collection. This is what the Caterpillar company uses to for their construction equipment wash pads through out the country. The basic premise of this washpad is to settle out as much of the solids as possible before it reaches the recycling system equipment. Therefore, slopes are kept to a minimum.

2.5.1 Washrack and AC Paved Apron Sizing: The size of the washrack was based on the largest vehicle by dimensions, the M920 loader. The M920 which includes the tractor and trailer is approximately 67 ft long by 10 ft wide. It was determined that a washrack length of 50 ft would be adequate to allow washing the entire M920 tractor trailer in two parts, or to wash only the loaded dozer (the user stated that this would be the normal case). TB 55-46-1 provided sizes and gross weights of vehicles and equipment authorized for this facility. A width of 20 ft and length of 50 ft was determined adequate for this facility. The user stated that the 50 ft length is adequate since only one vehicle at a time needs to be washed. They could even wash two smaller vehicles (one behind the other) with this long a washrack.

2.5.2 Washrack height: Capt Takishita indicated that the highest vehicle is the scoop loader which was 16'-2", therefore the clear height of the roof cover was set at 18'.

The following is a list of vehicles assigned to the Hilo USARC:

LIST OF VEHICLES AT HILO USARC

NUMBER	VEHICLE TYPE	WHEELED/TRACKED
1	621B 14CY SCRAPER	WHEELED
2	FLU419 S.E.E. TRACTOR	WHEELED
3	M35 2-1/2T CGO TRK	WHEELED
1	M920 20T TRK TRAC	WHEELED
1	M403LF 4 OT LOW BOY	WHEELED
1	M51A2 WW 5T DMP TRK	WHEELED
3	M51A2 WW T 5 DUMP TRK	WHEELED
1	M929 5T DMP TRK	WHEELED
2	D7G WW TRAC DOZER	TRACKED
HEAVIEST:	54,870 LB	
1	D7G WR TRAC DOZER	TRACKED
3	M105A2 TLR CARGO 1-1/2T	WHEELED
2	MW24C 2-1/2CY SCOOP LOADER	WHEELED
2	130G GRADER	WHEELED
1	M1008A1 1-1/4T TRK CGO	WHEELED
1	M1009 3/4T TRK UTIL	WHEELED
1	M923 5T FUEL TRK	WHEELED
1	M149A2 TRL TANK WATER	WHEELED
1	M997 TRK AMB 1-1/4T	WHEELED
8	M998 1-1/4KT TRK UTIL	WHEELED

36 VEHICLES TOTAL

NOTE: All 36 vehicles are washed 4 times per year with periodic washing of vehicles during the year (about 12 vehicles).

Washing time for all vehicles approx 4 hours.

High assumption: 1.5 CF per tracked vehicle & 0.5 CF per wheeled vehicle. More likely less due to travel from deployment site (PTA) to Hilo.

2.5.3 Washrack Slopes: TM 5-814-9 provided the following design requirements for washrack pavement minimum slope:

Washrack minimum slope: 2%

2.5.4 Washrack trench drain was not sloped because it was desired that the water move very slowly and allow the solids to settle out in here if possible. The baffle at the end of the trench drain was per suggestion of Mr. Richard Abe, CEPOD-ED-T.

2.6 Graywater Recycling System Selection

2.6.1 The RGF Environmental System provided the most complete and proven form of treatment and recycling of graywater for this similar type of facility. They service the Caterpillar company and have done many recycling systems for similar uses throughout the USA.

2.6.2 Washrack Water Requirements: The user stated that a pressure washer would suffice their cleaning needs and no water cannon would be required. Therefore, the RGF model XL which can provide 30 gpm of recycled water was deemed adequate for the users needs.

2.7 Motorpool Grading and Drainage Requirements

2.7.1 Grading.in the area was done to provide maximum slopes in parking areas of 2% and 6% (see Ref . Maximum AC paved roadway slope was set as 10%. Maximum side slopes of earth transition areas is 2H:1V in fill and 1-1/2H:1V in cut.

2.7.2 Drainage.improvements were not part of the scope of this project. There are no existing drainage improvements in the vicinity of the new motorpool and washrack. The new motorpool and washrack area will surface drain to the adjacent areas in the same general direction as the existing slopes. The new 12" drain line and headwall, wingwalls and apron are required to replace the existing 12" drain line and headwall. The old drain line and headwall was removed because it's age and condition was unknown and the best outlet location required a change in direction of the drain line.

SECTION 3
FOUNDATION & PAVEMENT DESIGN ANALYSIS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PKG 0-2		SH NO. 1	OF 6 SHS
LOCATION USARC HILO		SECTION	
DRAWING(S) NO. CONC PAVT DESIGN			
COMPUTED BY OTO	DATE 4/16	CHECKED BY	DATE

DESIGN ANALYSIS

CONCRETE PAVEMENT DESIGN

1. REFERENCES:

A. TM 5-822-2, "GENERAL PROVISIONS & GEOMETRIC DESIGNS FOR ROADS, STREETS, WALKS AND OPEN STORAGE AREAS," APR 1977.

B. TM 5-822-5, "PAVEMENT DESIGN FOR ROADS, STREETS, WALKS AND OPEN STORAGE AREAS," JUN 1992.

C. VEHICLE LISTING, USARC, HILO HAWAII.

2. ASSUMPTIONS:

SUBGRADE WILL CONSIST OF COHESIONLESS MEDIUM DENSE FILL. SUBGRADE MODULUS, K ≈ 200 PCI.

CONCRETE SHALL HAVE 28-DAY FLEXURAL STRENGTH 550 PSI WITH COMPRESSIVE STRENGTH 4,000 PSI. (CLASS "AA" WITH 1" NOMINAL AGGREGATE AND MIN 6.25 SACKS CEMENT PER CY).

3. DESIGN:

TRAFFIC CATEGORY = IVa (TRAFFIC CONTAINING MORE THAN 25% TRUCKS)

STREET CLASS = E

DESIGN INDEX = 5 (TABLE 3-1, TM5-822-5)

K = 200 PCI

FLEXURAL STRENGTH = 500 PSI

DESIGN THICKNESS = 7.85" (FIG 12-1, TM5-822-5)

REINFORCED THICKNESS = 7.00" (FIG 13-2, TM5-822-5)

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR Pkg 0-2 SH NO. 2 OF 6 SHS
LOCATION USARC HILO SECTION
DRAWING(S) NO. CONC PAVT DESIGN
COMPUTED BY OTO DATE 4/16 CHECKED BY DATE

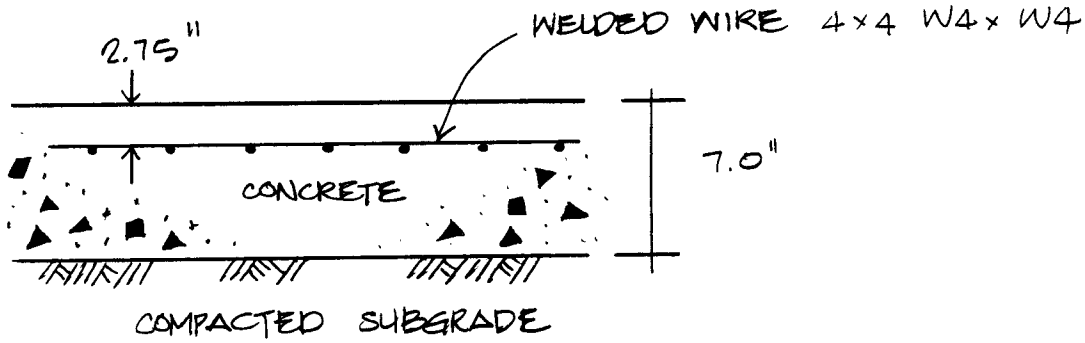
DESIGN ANALYSIS

REINFORCED THICKNESS = 7.0"

A_s = 0.10

S = 0.09

USE WIRE MESH 4 x 4 W4 x W4 (A_s = 0.120)



MAXIMUM JOINT SPACING = 45'

USE DETAILS IN TM5-822-5

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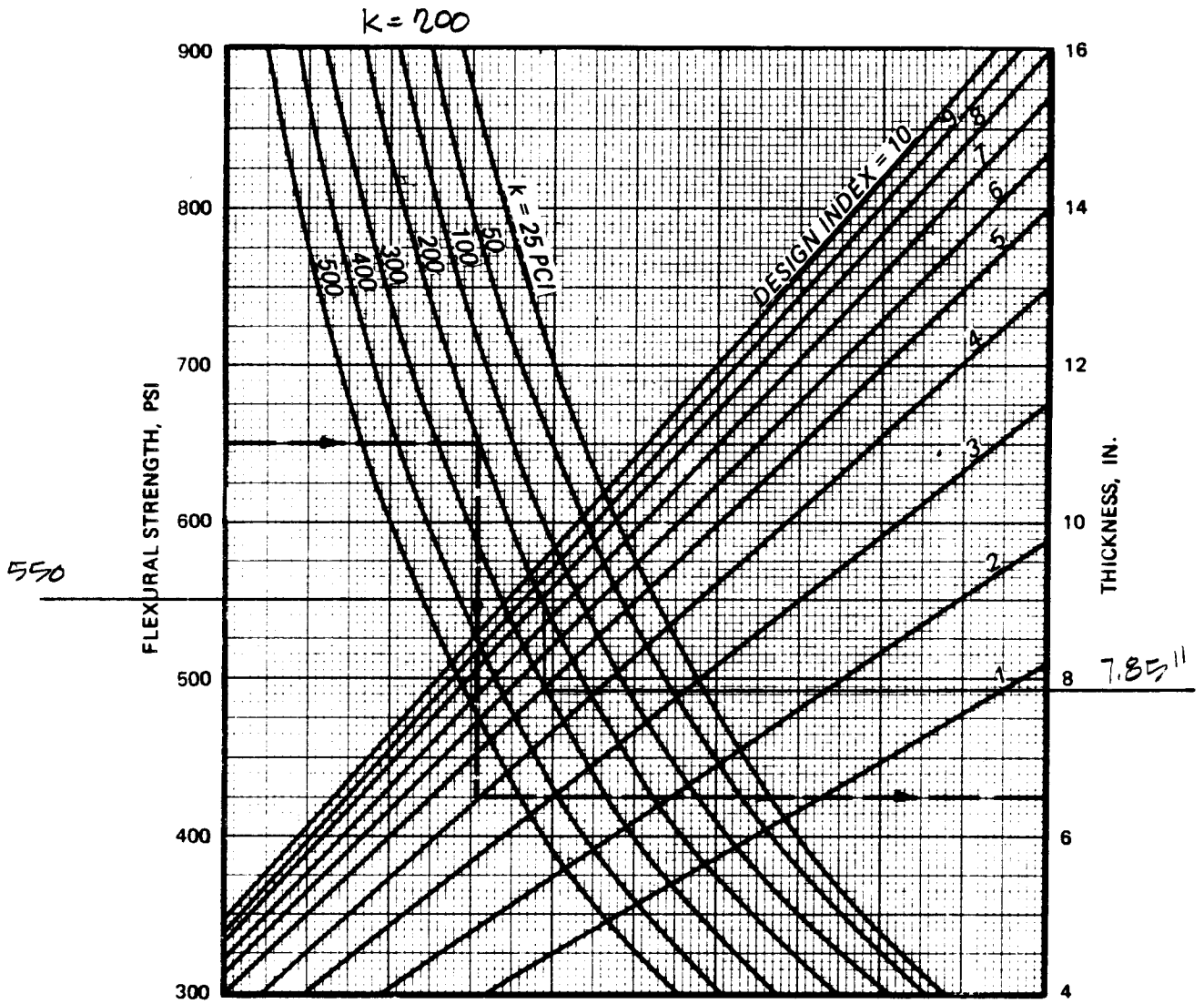

Figure 12-1. Design Curves for Plain Concrete Roads and Streets, and RCCP.

FY95 OMAR Pkg 0-2
USARC HQ
SHT 3 OF 6

in both directions. Once the h_r and S values have been determined, the maximum allowable slab length L is obtained from the intersection of the straight line and the scale of L. Difficulties may be encountered in sealing joints between very l slabs because of large volumetric changes caused by temperature changes.

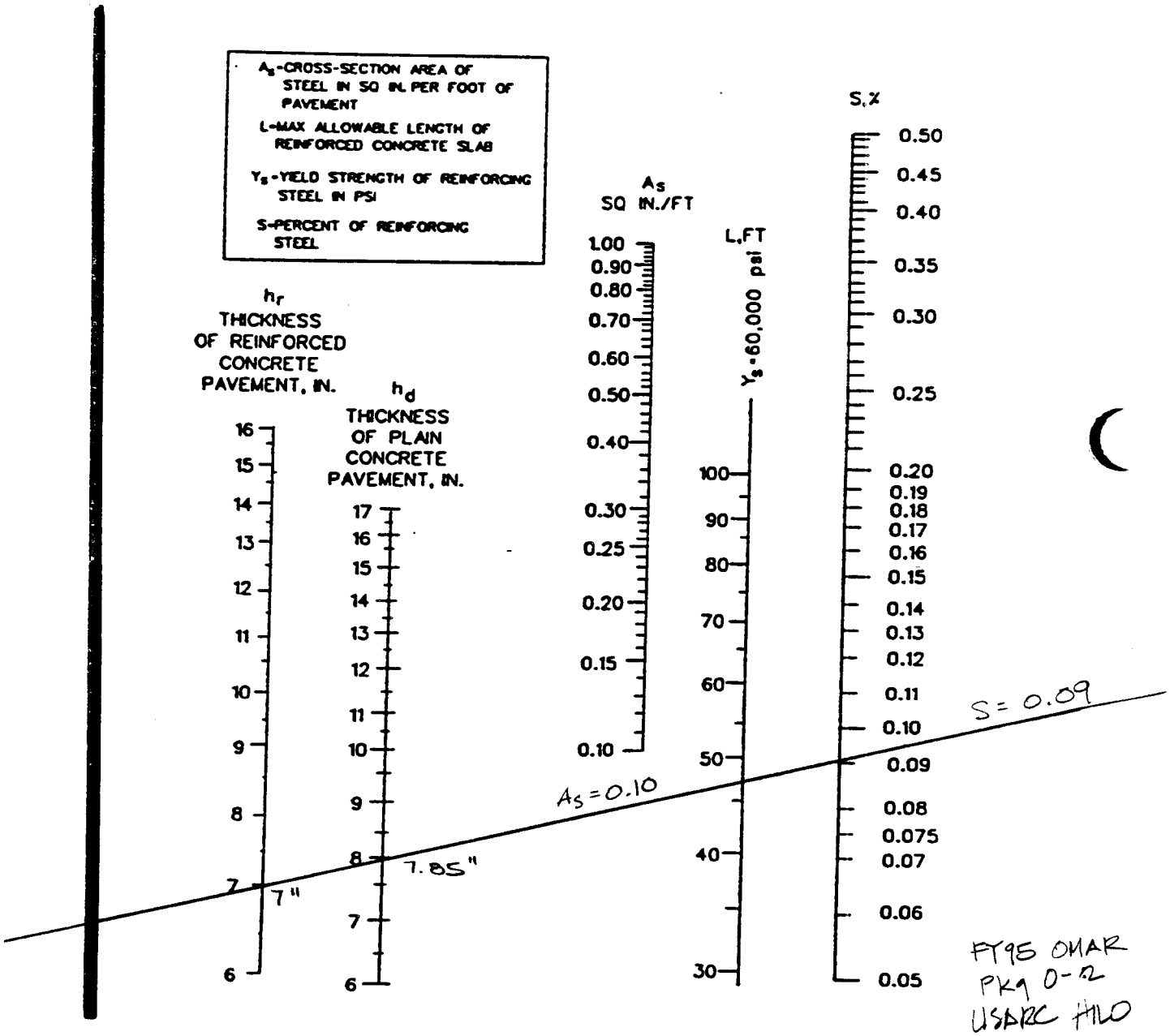

Figure 13-2. Reinforced Concrete Pavement Design

FY95 OMAR
PKG 0-2
USARC HILO
SHT 4 OF 6

b. Thickness design on stabilized base or subgrade. To determine the thickness requirements for reinforced concrete pavement on a stabilized foundation, it is first necessary to determine the thickness of plain concrete pavement required over the stabilized layer using procedures set for in chapter 12. This thickness of plain concrete then used with figure 13-2 to design the reinforced concrete pavement in the same manner discussed above for nonstabilized foundations.

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U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR Pkg 0-2		SH NO. 5	OF 6 SHS
LOCATION USARC HILO		SECTION	
DRAWING(S) NO. GRAVEL SURFACE ROAD			
COMPUTED BY OTO	DATE 4/16	CHECKED BY	DATE

DESIGN ANALYSIS

GRAVEL SURFACE ROADS

1. REFERENCES:

A. TM5-822-12, "DESIGN OF AGGREGATE SURFACED ROADS AND AIRFIELDS," SEP 1990.

B. VEHICLE LISTING, USARC HILO.

2. ASSUMPTIONS

SUBGRADE WILL CONSIST OF COHESIONLESS MEDIUM DENSE FILL. CBR ≈ 10%

3. DESIGN

STREET CLASS = G (UNDER 70 VEHICLES PER DAY) TABLE 1, TM5-822-12

TRAFFIC CATEGORY = IV a (MORE THAN 25% TRUCKS)

DESIGN INDEX = 2 (TABLE 2, TM5-822-12)

SUBGRADE CBR = 10%

DESIGN THICKNESS = 3.8"

- USE 4" THICK GRAVEL BASE COURSE
- RECOMMEND 1-1/2" MAX SIZE AGGREGATE, HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1985.

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FY95 OMAR Pkg 0-2
USARC HILO
SHT 6 OF 6

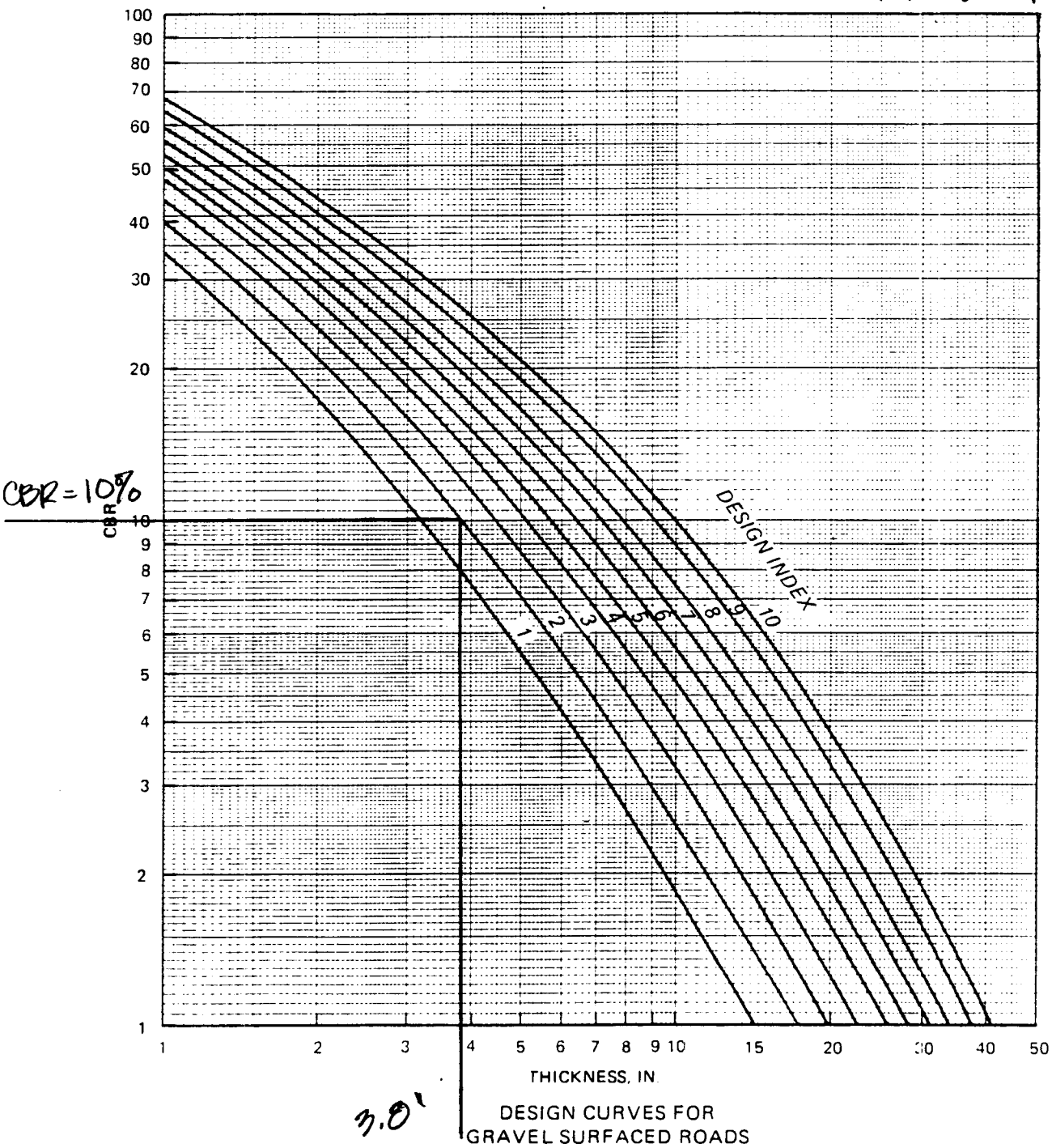

Figure 1. Thickness design curves for aggregate surfaced roads.

f. Roads for tracked vehicles. Roads sustaining traffic of tracked vehicles weighing less than 40,000 pounds, and forklift trucks weighing less than 10,000 pounds, will be designed in accordance with the pertinent class and category from table 2. Roads sustaining traffic of tracked vehicles, heavier than 40,000 pounds, and forklift trucks heavier than 10,000 pounds, will be designed in accordance with the traffic intensity and category from table 3.

g. Design life. The life assumed for design is 25 years. For a design life less than 5 years, the design indexes in tables 2 and 3 may be reduced by one. Design indexes below three should not be reduced.

h. Entrances, exits, and segments. Regardless of the design class selected for hardstands, special consideration should be given to the design of approach roads, exit roads, and other heavily trafficked areas. Failure or poor performance in these channelized traffic areas

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PKG 0-2	SH NO. 1 OF 4 SHS
LOCATION USARC HILO	SECTION
DRAWING(S) NO.	
COMPUTED BY OTO DATE 4/6/95	CHECKED BY DATE

DESIGN ANALYSIS

FLEXIBLE PAVEMENT DESIGN

1. REFERENCES:

A. TM 5-822-2 "GENERAL PROVISIONS & GEOMETRIC DESIGNS FOR ROADS, STREETS, WALKS AND OPEN STORAGE AREAS, APRIL 1977.

B. TM 5-822-5, "PAVEMENT DESIGN FOR ROADS, STREETS, WALKS, AND OPEN STORAGE AREAS, JUNE 1992.

C. VEHICLE LISTING, USARC, HILO, HAWAII.

2. ASSUMPTIONS:

SUBGRADE WILL CONSIST OF COHESIONLESS MEDIUM DENSE FILL. CBR ≈ 10%

3. TRAFFIC CATEGORY = IVa (TRAFFIC CONTAINING MORE THAN 25% TRUCKS)*

STREET CATEGORY = E

DESIGN INDEX = 5 (TABLE 3-1, TM 5-822-5)

SUBGRADE CBR = 10%

BASE COURSE CBR = 80%

DESIGN THICKNESS = 11.2 INCH (FIG 8-1, TM 5-822-5)

* NO TRACKED VEHICLES ON PAVEMENT. DOZERS ON TRAILERS.

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U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE	FY95 OMAR PKG 0-2	SH NO. 2 OF 4 SHS	
LOCATION	USARC HILO	SECTION	
DRAWING(S) NO.			
COMPUTED BY	OTO	DATE	CHECKED BY	DATE

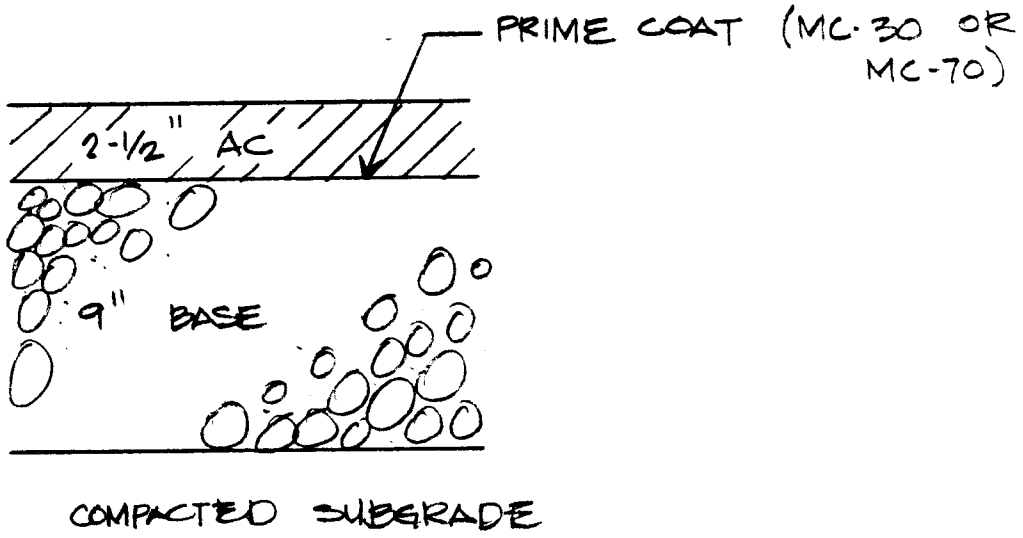
DESIGN ANALYSIS

4. PAVEMENT SECTION

ASPHALTIC CONCRETE	2-1/2 INCH	(TABLE 6-1 TM5-822-5)
BASE COURSE	9 INCH	
TOTAL	11-1/2 INCH	

5. AC - USE STATE MIX IV (REVISED 1990)

BASE - USE 1-1/2 INCH MAX SIZE AGGREGATE.



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1 Jan 92

LIST OF VEHICLES AT HILO USARC

NUMBER	VEHICLE TYPE	WHEELED/TRACKED	
1	621B 14CY SCRAPER	WHEELED	
2	FLU419 S.E.E. TRACTOR	WHEELED	
3	M35 2-1/2T CGO TRK	WHEELED	
1	M920 20T TRK TRAC	WHEELED	
1	M403LF 4 OT LOW BOY	WHEELED	
1	M51A2 WW 5T DMP TRK	WHEELED	
3	M51A2 WW T 5 DUMP TRK	WHEELED	
1	M929 5T DMP TRK	WHEELED	
2	D7G WW TRAC DOZER	TRACKED *	DOZERS WILL BE TRAILERED.
1	D7G WR TRAC DOZER	TRACKED *	
3	M105A2 TLR CARGO 1-1/2T	WHEELED	
2	MW24C 2-1/2CY SCOOP LOADER	WHEELED	
2	130G GRADER	WHEELED	
1	M1008A1 1-1/4T TRK CGO	WHEELED	
1	M1009 3/4T TRK UTIL	WHEELED	
1	M923 5T FUEL TRK	WHEELED	
1	M149A2 TRL TANK WATER	WHEELED	
1	M997 TRK AMB 1-1/4T	WHEELED	
8	M998 1-1/4KT TRK UTIL	WHEELED	

36 VEHICLES TOTAL

ENGINEER EQUIPMENT IN FIELD APPROXIMATELY 6 TIMES A YEAR. M997/M998'S IN THE FIELD APPROXIMATELY 8 TIMES A YEAR

FIELD EXERCISES IN HILO, KILAUEA MILITARY CAMP AND POHAKULOA TRAINING AREA. TERRAIN IS LAVA ROCK AND COMMON EARTH

ALL 36 VEHICLES WASHED FOUR TIMES PER YEAR. PERIODICALLY WASH VEHICLES DURING THE YEAR.

THE AMOUNT OF SLUDGE PER VEHICLE SHOULD BE ASSUMED AS FOLLOWS:

WASHING TIME FOR WASHING ALL VEHICLES IS ABOUT 4 HOURS

1.5 CU FT PER TRACKED VEHICLE
.5 CU FT PER WHEELED VEHICLE

FY95 OMAR Pkg 0-2
USARC HILO
SHT. 4 OF 4

fore the reduction will be affected in the subbase course immediately above the subgrade. When only limited rainfall records are available, or the annual precipitation is close to the 15-inch criterion, careful consideration will be given to the sensitivity of the subgrade to small increases in moisture content before any reduction in thickness is made.

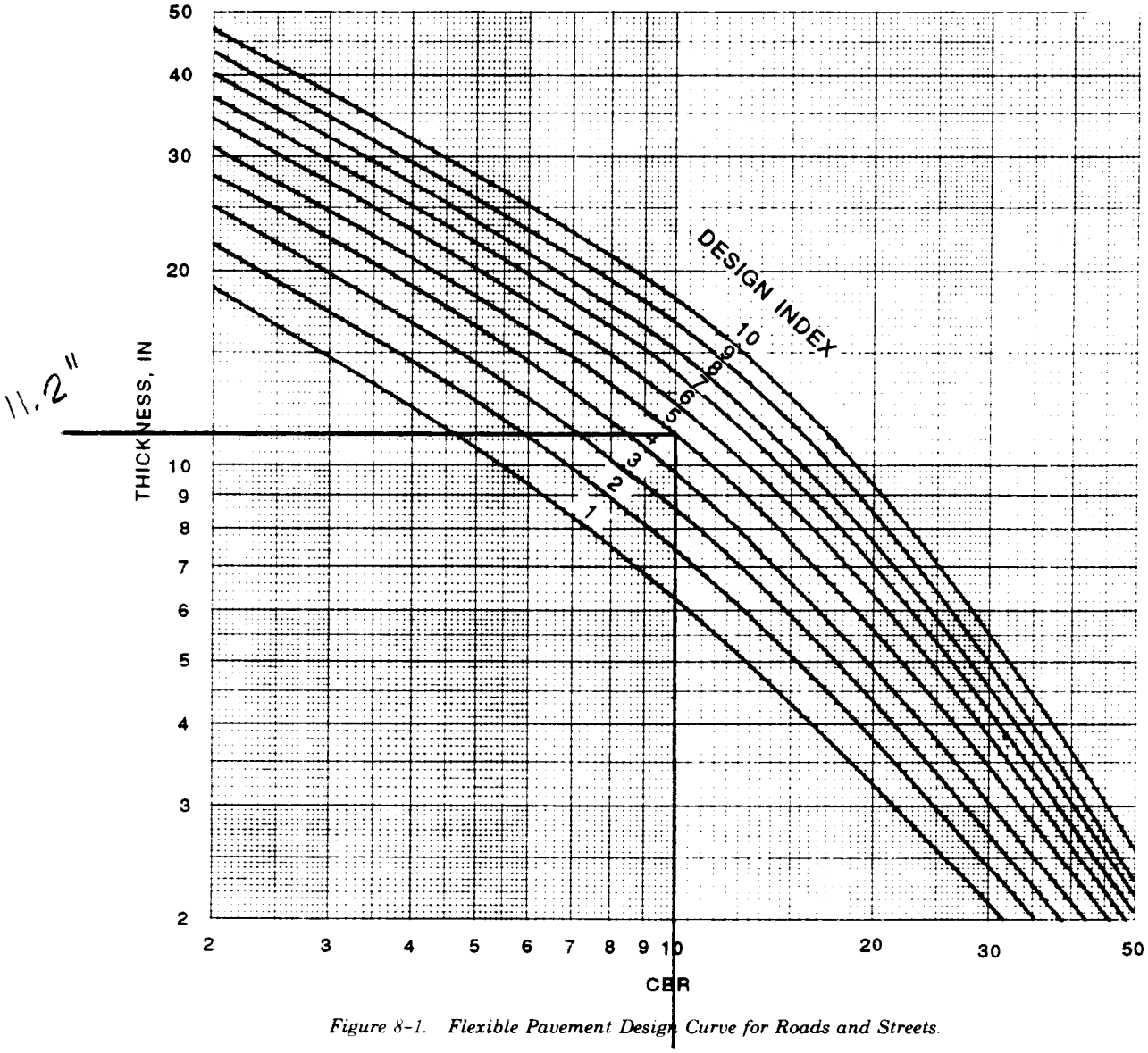


Figure 8-1. Flexible Pavement Design Curve for Roads and Streets.

8-5. Example Thickness Design-Conventional Flexible Pavements.

This example illustrates design by the CBR method when the subgrade, subbase, or base course materials are not affected by frost. Assume that a design is to be prepared for a road that will require a design index of 5. Further assume that compaction requirements will necessitate an increase in subgrade density to a depth of 9 inches below the subgrade surface and that a soft layer occurs within the subgrade 24 inches below the subgrade surface. The CBR design values of the various subgrade layers and the materials available for subbase and base course construction are as follows:

SECTION 6
STRUCTURAL DESIGN ANALYSIS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

6.1 References

6.1.1 TM 5-809-1 (AFM 88-3, Chapter 1), Load Assumptions for Buildings.

6.1.2 ASCE 7-93, Minimum Design Loads for Buildings and Other Structures.

6.2 General Parameters

The structural requirements for subject project was to provide a 30' x 50' roof to cover new 20' x 50' washrack and the recycling equipment. The washrack and the recycling equipment will be placed on a concrete slab.

6.2.1 Design Loads

Roof Load	20 psf
Design Wind Speed, Exposure C	80 mph
Seismic Zone (Z=0.4)	4

6.2.2 Foundation characteristics

Allowable bearing stress of 2000 psf at 2' below the grade. Boring logs for previous buildings on the other side of the reserve center indicated that hard rock was encountered approximately 2' below the natural grade. The natural grade was determined using a survey done in the 70's. The natural grade elevations were checked with the survey done for this project and it appears that at the shallowest place, hardrock will be encountered at 2' below.

Matt footing notes provided by Soils and Survey Branch were placed on the drawings.

6.3 Functional and Technical Requirements

6.3.1 Design stresses: Allowable unit stress or yield stress of materials.

Concrete- Compressive strength fc' @ 28 days shall be as follows:

All concrete	4,000 psi

Concrete- Flexural strength @ 28 days for slabs on grade for washrack areas shall be 600 psi.

Reinforcing Steel	40,000 psi
Structural Rolled Shapes, Plates (Fy)	36,000 psi
Steel, Sheet and Strip Shapes (ASTM A 570, A606 & A 607)(Fy)	50,000 psi

6.4 Design Criteria

Hardrock may be encountered at a depth of 2'.

Cover over the washrack will be a pre-engineered metal building will no walls. The roof slope will be 1:12 with a center ridge.

The foundation of the rigid frames will be a matt footing. The depth of the matt footing is less than 2'. The tie beams will be placed in the matt footing.

Due to the relative small size of this project, the strength of the concrete entire project shall be fc' = 4,000 psi since part of the structure will be required to contain liquids.

Washrack foundation slab will include a 3' high wall to protect recycling equipment.

Due to the depth of the sump (32" + 8" concrete) and the depth of the collection tanks (36" + 8" concrete), hardrock may be encountered.

The tie beam for the middle ridge frame will be below the 12" trench drain. The tie beams for the end ridge frames will be in the thicken edge.

The slab elevation will be raised 8" on the side that the recycling equipment is located.

SECTION 7
MECHANICAL DESIGN ANALYSIS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

7.1 General

The scope of this project includes mechanical work in the supply room of the Assembly Building. The room shall be air conditioned with a window air conditioner to cool it during the summer months and to also help with dehumidification. Room condition shall be 75 deg F at 50% relative humidity.

7.1.1. References

7.1.1.1 AEI Design Guide

7.1.1.2 ASHRAE Handbook, 1993

SECTION 8
ELECTRICAL DESIGN ANALYSIS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

U.S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER...		SH NO. ____ OF ____ SHS	
LOCATION USARC, HILO, HAWAII		SECTION ELEC	
DRAWING(S) NO.			
COMPUTED BY CY	DATE 4/95	CHECKED BY	DATE

DESIGN ANALYSIS

1. REFERENCES:

A. NFPA 70-1993, NATIONAL ELECTRICAL CODE

B. ANSI C2-1193 NATIONAL ELECTRICAL SAFETY CODE

C. TM 5-811-1, ELECTRICAL POWER SUPPLY AND DISTRIBUTION, SEPTEMBER 1984

D. IES LIGHTING HANDBOOK, APPLICATION VOLUME1987, REFERENCE VOLUME 1984

E. FY88, ARCHITECTURAL AND ENGINEERING INSTRUCTIONS FOR TACTICAL VEHICLE MAINTENANCE FACILITIES

F. TM 5-814-9 TECHNICAL MANUAL, CENTRAL VEHICLE WASH FACILITIES, FEB 1992

G. TM 5-811-1 TECHNICAL MANUAL, ELECTRICAL POWER SUPPLY AND DISTRIBUTION, SEPTEMBER 1984

H. TM 5-811-2 TECHNICAL MANUAL, ELECTRICAL DESIGN, INTERIOR ELECTRICAL SYSTEMS, SEPTEMBER 1983

I. FM 19-30, PHYSICAL SECURITY

2. SCOPE OF WORK:

THE ELECTRICAL SCOPE OF WORK FOR THIS PROJECT INCLUDES:

A. PROVIDE ELECTRICAL SUPPORT FOR WASHRACK EQUIPMENT INCLUDING OIL/WATER SEPARATOR (ASSOCIATED PUMPS), PRESSURE WASHER AND STEAM/PRESSURE WASHER.

B. PROVIDE LIGHTING AND CONVENIENCE RECEPTACLES FOR WASHRACK AREA. REQUIREMENT FOR PROVISION OF CONVENIENCE RECEPTACLES INDICATED BY USING AGENCY.

C. PROVIDE LIGHTING FOR NEW PERIMETER ROADWAY AND (IF GOVERNMENT OPTION AWARDED) NEW PAVED AREA. ILLUMINATION SHALL BE ADEQUATE FOR ROADWAY/PARKING FUNCTIONS. TASK LIGHTING NOT REQUIRED (VEHICLES ONLY).

D. PROVIDE ELECTRICAL SUPPORT FOR NEW WINDOW AIR CONDITIONING UNIT TO BE INSTALLED IN OFFICE, USARC ASSEMBLY BUILDING.

3. DISCUSSION:

A. PER REF 1A, ARTICLE 511-2, VEHICLE WASHRACK IS NOT A (HAZARDOUS) CLASSIFIED LOCATION.

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER... SH NO. ____ OF ____ SHS
LOCATION USARC, HILO, HAWAII SECTION ELEC
DRAWING(S) NO. ____
COMPUTED BY CY DATE 4/95 CHECKED BY ____ DATE ____

DESIGN ANALYSIS

B. ELECTRICAL SUPPORT FOR WASHRACK EQUIPMENT:

(1) POWER REQUIREMENTS FOR WASHRACK EQUIPMENT PROVIDED BY CIVIL DESIGN. SEE CIVIL DESIGN ANALYSIS FOR MANUFACTURER'S DATA ON OIL/WATER SEPARATOR, PRESSURE WASHER, AND STEAM/PRESSURE WASHER, AND MOTOR CALCULATIONS, ELECTRICAL DESIGN ANALYSIS.

C. LIGHTING, WASHRACK AREA:

(1) LEVELS OF ILLUMINATION. LIGHTING REQUIREMENTS FOR WASHRACK AREA PROVIDED BY REF 1E,F. REF 1F REQUIRES A LIGHTING LEVEL OF 3 FOOTCANDLES VERTICAL AND 5 FOOTCANDLES HORIZONTAL ON TASK. SEE LIGHTING CALCULATIONS, ELECTRICAL DESIGN ANALYSIS.

(2) ALTHOUGH REF 1E REQUIRES METAL HALIDE PENDANT MOUNTED FIXTURES, DUE TO THE RELATIVELY LOW CEILING HEIGHT IN THE VEHICLE WASH AREA, FLUORESCENT LIGHT FIXTURES WERE PROVIDED FOR UNIFORM LIGHT DISTRIBUTION.

D. LIGHTING, EXTERIOR:

(1) LIGHTING REQUIREMENTS FOR NEW PERIMETER ROADWAY PROVIDED BY REF 1D,E,I. THE HIGHEST OF THESE REQUIREMENTS IS REF 1D, WHICH REQUIRES AN ILLUMINATION LEVEL OF 1 FOOTCANDLE ON PAVEMENT FOR A MEDIUM LEVEL OF ACTIVITY.

(2) ALTHOUGH REF 1E INDICATES THE PROVISION OF HIGH PRESSURE SODIUM LIGHTS, METAL HALIDE WAS SELECTED FOR COLOR RENDERING ABILITY.

(2) LIGHT FIXTURE LAYOUT WAS OBTAINED GRAPHICALLY FROM MANUFACTURER'S DATA INCLUDING PHOTOMETRIC DIAGRAMS.

E. WINDOW AC UNIT:

(1) POWER REQUIREMENTS FOR NEW WINDOW AC UNIT PROVIDED BY MECHANICAL DESIGN. SEE MECHANICAL DESIGN ANALYSIS FOR MANUFACTURER'S DATA.

(2) EXISTING ELECTRICAL PANELBOARD WAS LOCATED WITHIN THE ASSEMBLY BUILDING. SPARE CIRCUITS CONFIRMED. ONE NEW 1P-20A CIRCUIT BREAKER WILL BE PROVIDED WITHIN EXISTING PANEL. SEE MOTOR CALCULATIONS, ELECTRICAL DESIGN ANALYSIS.

(3) HOMERUN SHALL BE SURFACE MOUNTED ON EXISTING CMU WALL.

U.S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER... SH NO. ____ OF ____ SHS
LOCATION USARC, HILO, HAWAII SECTION ELEC
DRAWING(S) NO. ____
COMPUTED BY CY DATE 4/95 CHECKED BY ____ DATE 4/6

DESIGN ANALYSIS

MOTOR CALCULATIONS

1. STEAM/PRESSURE WASHER
3PH, 208V, 7 1/2HP

FLA = 24.2A (NEC TABLE 430-150)

A. CONDUCTOR:
(1.25)(24.2A) = 30.25A ==> #8 AWG

B. CKT BRKR:
(2.5)(24.2A) = 60.5A ==> 3P-60A

2. PRESSURE WASHER
1PH, 208V, 4HP

FLA = 24.8A (NEC TABLE 430-148)

A. CONDUCTOR:
(1.25)(24.8A) = 31.0A ==> #8 AWG

B. CKT BRKR:
(2.5)(24.8A) = 62.0A ==> 2P-60A

3. OIL/WATER SEPARATOR
1PH, 120V

PRESSURE PUMP FLA = 13.6A (PROVIDED BY MFR)
PROCESSING PUMP FLA = 10.0A
HOUR METER (NOMINAL)

A. CONDUCTOR:
(1.25)(13.6A) + 10.0 = 27.0A ==> #10 AWG

B. CKT BRKR:
(2.5)(13.6A) + 10.0 = 44.0A ==> 1P-45A

C. DISCONNECTING MEANS: ==> 1P-30A (RQMT PROVIDED BY MFR)

4. OIL/WATER SEPARATOR
1PH, 115V, 1/3HP

FLA = 7.2A (NEC TABLE 430-148)

A. CONDUCTOR:
(1.25)(7.2A) = 9.0A ==> #12 AWG

B. CKT BRKR:
(2.5)(7.2A) = 18.0A ==> 1P-20A

U.S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER... SH NO. ____ OF ____ SHS
LOCATION USARC, HILO, HAWAII SECTION ELEC
DRAWING(S) NO. ____
COMPUTED BY CY DATE 4/95 CHECKED BY ____ DATE ____

DESIGN ANALYSIS

5. WINDOW AIR CONDITIONER
1PH, 115V, 14,000BTU

FLA = 12.0 (PROVIDED BY MFR)

A. CONDUCTOR:
(1.25)(12A) = 15A ==> #12 AWG

B. CKT BRKR:
(1.75)(12A) = 21A ==> 1P-20A

LIGHTING CALCULATIONS

1. WASHRACK AREA

A. CONSTRUCTION: METAL ROOF SUPPORTED BY STEEL COLUMNS. NO WALLS.

B. REQUIRED LEVELS OF ILLUMINATION: 3 FOOTCANDLES VERTICAL
5 FOOTCANDLES HORIZONTAL

C. WASHRACK DIMENSIONS:
LENGTH: 50 LF
WIDTH: 30 LF
HEIGHT: 20 FT AT EDGE, 21.2 FT AT CREST (ROOF @ 1/12 SLOPE)
CEILING CAVITY: 2 FT
FLOOR CAVITY: NONE

D. LUMINAIRE DATA:
LAMP TYPE: FLUORESCENT, 32W T8
LAMPS PER LUMINAIRE = 1
LUMENS PER LAMP = 2900
LUMENS PER LUMINAIRE = 2900

E. CALCULATIONS:
ROOM CAVITY RATIO, RCR = $5(18)(50+30)/(50)(30)$ = 4.80
CEILING CAVITY RATIO, CCR = $5(2)(50+30)/(50)(30)$ = 0.53
EFFECTIVE CAVITY REFLECTANCE, ρ_{CC} = 18%
EFFECTIVE FLOOR REFLECTANCE, ρ_{FC} = 40%
COEFFECIENT OF UTILIZATION, CU = 0.380
LIGHT LOSS FACTOR, LLF = 0.75 (EST)

NUMBER OF LUMINAIRES = $(5)(50)(30)/(2900)(0.38)(0.75)$ = 9.1

* USE 12 FIXT FOR UNIFORM LIGHT DIST, ENSURE ADEQUATE VERTICAL ILLUMINATION

ACTUAL ILLUMINANCE = $(12)(2900)(0.380)(0.75)/(50)(30)$ = 6.61

U.S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER... SH NO. ____ OF ____ SHS
LOCATION USARC, HILO, HAWAII SECTION ELEC
DRAWING(S) NO. ____
COMPUTED BY CY DATE 4/95 CHECKED BY JG DATE ____

DESIGN ANALYSIS

LOAD CALCULATIONS

1. LIGHTING LOAD

TOTAL LOAD = (5)(400W) = 2000W

A. CONDUCTOR:
(1.25)(20.8A) = 26.0A ==> #10 AWG

B. CKT BRKR:
(1.25)(20.8A) = 26.0A ==> 1P-30A

PANEL "WASHRACK"

CKT NO	DESCRIPTION	CONNECTED LOAD, kVA ϕA	ϕB	ϕC	DF	DEMAND LOAD, kVA ϕA	ϕB	ϕC
1,3,5	STEAM/PRESSURE WASHER	3.0	3.0	3.0	0.8	2.4	2.4	2.4
2	OIL/WATER SEPARATOR	2.8			0.8	2.2		
4,6	PRESSURE WASHER		3.0	3.0	0.8		2.4	2.4
7	WASHRACK LIGHTS	0.5			1.0	0.5		
8	SUMP PUMP	0.8			0.8	0.6		
9,11	FLOODLIGHTS		1.2	1.2	1.0		1.2	1.2
10	WASHRAK RECEPTACLES		0.5		0.7		0.4	
12	SPACE		0.0	0.0			0.0	0.0
		7.1	7.2	7.2		5.7	6.4	6.0

MAIN BREAKER: (6.4kVA)/(120V) = 53.3A
(53.3A)(1.25) = 66.7A
+25% SPARE = 83.3 ==> 3P-100A

CONDUCTOR: (53.3A)(1.25) = 66.7A ==> #4AWG

VOLTAGE DROP CALCULATIONS

1. SUPPLY

LENGTH OF RUN = 240 FT
SUPPLY CONDUCTOR = #4AWG
AC RESISTANCE, R = 0.31Ω/1000LF
REACTANCE, X_L = 0.048Ω/1000LF

LOAD AMPS = (6.0)(0.8 DEMAND)(0.8 DIVERSITY)/120 = 32A

V_{DROP} L-L = (/3)(32A)[(0.31/1000)(240)(0.8) + (0.048/1000)(240)(0.6)] = 3.69V
% V_{DROP} = (3.69V)/(208V) = 1.77% CONDUCTOR ADEQUATE

U.S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR PROJECT, REPLACE WASHRACK; INSTALL OIL/WATER... SH NO. ____ OF ____ SHS
LOCATION USARC, HILO, HAWAII SECTION ELEC
DRAWING(S) NO. ____
COMPUTED BY CY DATE 4/95 CHECKED BY ____ DATE ____

DESIGN ANALYSIS

2. LIGHTING - 1 (TO 3-EA NEW LIGHT FIXT ON NEW PERIMETER ROAD)

LENGTH OF RUN = 270 FT
SUPPLY TO LOAD 1 = 60FT
LOAD 1 TO LOAD 2 = 110FT
LOAD 2 TO LOAD 3 = 100FT
SUPPLY CONDUCTOR = #10AWG
AC RESISTANCE, R = 1.2Ω/1000LF
REACTANCE, X_L = 0.052Ω/1000LF

LOAD AMPS = (1)(400W)(1.25VA/W)/120 = 4.17A EA

V_{DROP} L-L (1) = (/3)(12.5A)[(1.2/1000)(60)(0.8) + (0.052/1000)(60)(0.6)] = 1.29V
% V_{DROP} = (1.29V)/(208V) = 0.62%

V_{DROP} L-L (2) = (/3)(8.3A)[(1.2/1000)(110)(0.8) + (0.052/1000)(110)(0.6)] = 1.57V
% V_{DROP} = (1.57V)/(208V) = 0.75%

V_{DROP} L-L (3) = (/3)(4.17A)[(1.2/1000)(100)(0.8) + (0.052/1000)(100)(0.6)] = 0.72V
% V_{DROP} = (0.72V)/(208V) = 0.34%

TOTAL VOLTAGE DROP = 1.71%

3. LIGHTING - 2 (TO 1-EA NEW LIGHT FIXT, NEW PAVED PARKING AREA)

LENGTH OF RUN = 160 FT
SUPPLY CONDUCTOR = #10AWG
AC RESISTANCE, R = 1.2Ω/1000LF
REACTANCE, X_L = 0.052Ω/1000LF

LOAD AMPS = (1)(400W)(1.25VA/W)/120 = 4.17A

V_{DROP} L-L (3) = (/3)(4.17A)[(1.2/1000)(160)(0.8) + (0.052/1000)(160)(0.6)] = 1.15V
% V_{DROP} = (1.15V)/(208V) = 0.55%

DRAFT

ASBESTOS SURVEY

KUNIEDA U.S. ARMY RESERVE CENTER

HILO, HAWAII

DRAFT

PREPARED BY:
NAVY PUBLIC WORKS CENTER
LONG RANGE MAINTENANCE
PLANNING BRANCH, CODE 431
PEARL HARBOR, OAHU, HAWAII
MAY 1994

ENCLOSURE(4)

I. INTRODUCTION

The Long Range Maintenance Planning Branch of the Navy Public Works Center (PWC), Pearl Harbor, was engaged by the PWC Environmental Compliance Division to perform an asbestos survey for the Kunieda U. S. Army Reserve Center in Hilo, Hawaii. The primary objective of this survey was to provide general information for this facility regarding the presence of accessible and/or exposed building materials which commonly contain asbestos.

The survey and analytical methods have been used to provide information regarding the presence of accessible and/or exposed suspect asbestos containing building material existing in the facility at the time of inspection. Test results are valid only for the materials tested. There is a distinct possibility that conditions may exist which could not be identified within the scope of the study or which were not apparent during the site visit. This inspection covered only those areas which were exposed and/or physically accessible to the inspector. The study is also limited to the information available from the U. S. Army Reserve at the time it was conducted.

II. SURVEY METHODOLOGY

The overall sampling protocol was designed to conform with the Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) of 1986 and 1987 (40 CFR 763). EPA accredited inspectors were utilized to collect representative samples and to document sample locations. Bulk samples were collected in resealable plastic bags, individually sealed and labeled.

The samples were analyzed by Unitek Inc. whose laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Analysis was performed using polarized light microscopy (PLM).

III. SURVEY AREAS

The Kunieda Reserve Center consists of three separate facilities; an administration building, an assembly hall and food preparation building, and a motor pool facility. The surveyed areas included office/administration spaces, meeting area, shower/restroom facilities, scullery facilities, mechanical room, work shop area, and miscellaneous storage areas. A total of 114 bulk samples were collected from the following areas:

Exterior: Mastic, Felt, Joint Compound from Roof

Interior: Floor Tile (vinyl and ceramic), Basecove, Adhesive, and Grout

Gypsum Board Walls

Acoustical Ceiling (tile and gypsum board)

Insulation Panels on Walls and Ceiling

Insulation on HVAC Ducts, Piping, and Storage Tanks

Expansion Joints for Concrete Slab

IV. ASBESTOS-CONTAINING BUILDING MATERIALS

All three buildings had sampled materials which tested positive (area concentration greater than 1%) for asbestos. All of the positive results are from materials classified as non-friable and fall under AHERA's "Miscellaneous" category. On the inspection and assessment summary sheets, there is no entry for the AHERA category numbers (1-7) since they apply only to friable asbestos material. However, notations on the condition and disturbance potential were included to provide more insight on the general condition of the sampled material.

Building and material descriptions are as follows:

Administration Building:

- 12" x 12" White Floor Tile - approx 310 sq ft, Corridors

Assembly Hall:

- 12" x 12" Floor Tile - approx 168 sq ft, Office

Motor Pool:

- 12" x 12" Floor Tile - approx 272 sq ft, Office
- Floor Expansion Joint Compound - approx 240 lin ft, Garage

INSPECTION AND ASSESSMENT
SUMMARY RESULTS

Building No. ADMIN
Activity KUNIEDA U.S. ARMY RESERVE CENTER
Location HILO, HAWAII

Inspector R.A. FORD

Date 22-April-94

ACBM LOCATION		ACBM CHARACTERISTICS					ASSESSMENT RESULTS			
Homogeneous Area No.	Functional Space No.	Type	Friable		Asbestos Content	Amount of Material (Area)	Condition	Disturbance Potential	AHERA Category (1-7)	Reason for Damage
			Yes	No	% or Assumed					
	ONE	12"X12" WHITE FLOOR TILE		X	10% CHRYSOTILE	142 SQ.FT.	GOOD	LOW		
	TWO	12"X12" WHITE FLOOR TILE		X	10% CHRYSOTILE	168 SQ.FT.	GOOD	LOW		

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. ONE **Type** _____ **Location** _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ **Description:** FLOOR TILE

Approximate Amount of Material (linear or square ft.): 142 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: _____

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

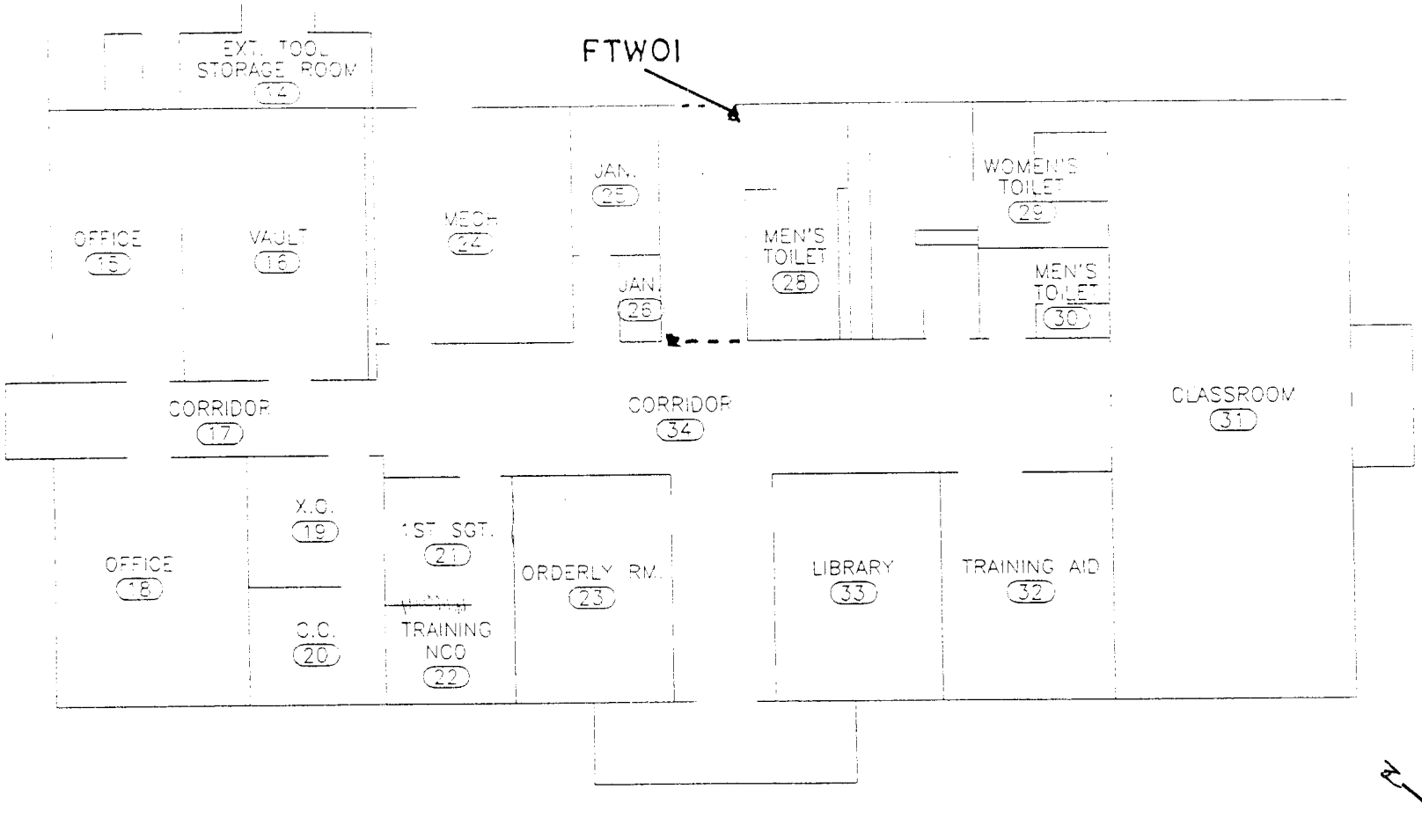
Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	CORRIDOR	FTW01	12"X12" WHITE FLOOR TILE	CHRYSOTILE	10

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

WHITE FLOOR TILE

ACTIVITY: USAR CTR. HILO

FACILITY:

FACILITY DESCRIPTION: ADMIN. BLDG

FUNCTIONAL SPACE NO.: 1

HOMOGENOUS AREA NO.:

INSPECTOR: R. FORD, E. FUJIMOTO

DATE: 1/18/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HLO

Functional Space No. ONE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: _____

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. TWO **Type** **Location**

Type of Suspect Material: ☐ **Surfacing** ☐ **TSI** ☒ **Other**

Homogeneous Area No. **Description:** FLOOR TILE

Approximate Amount of Material (linear or square ft.): 168 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description:

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

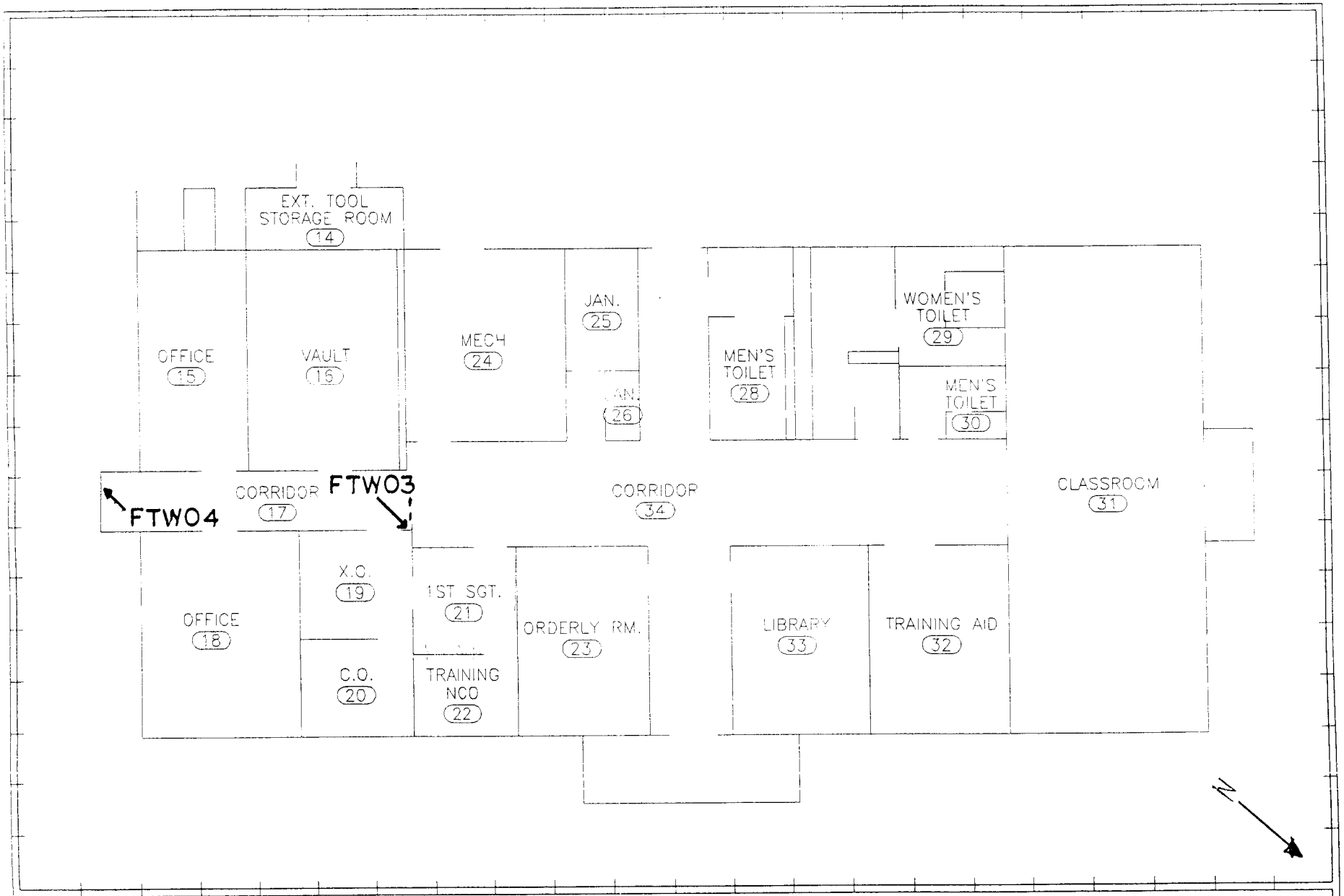
Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	CORRIDOR	FTW03	12"X12" WHITE FLOOR TILE	CHRYSOTILE	10
ONE	CORRIDOR	FTW02	12"X12" WHITE FLOOR TILE	"	"

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 2

HOMOGENOUS AREA NO.

INSPECTOR R. FORD, E. FUJIMOTO

DATE 1/18/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. TWELVE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: JOINT COMPOUND

Approximate Amount of Material (linear of square ft.): 88 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

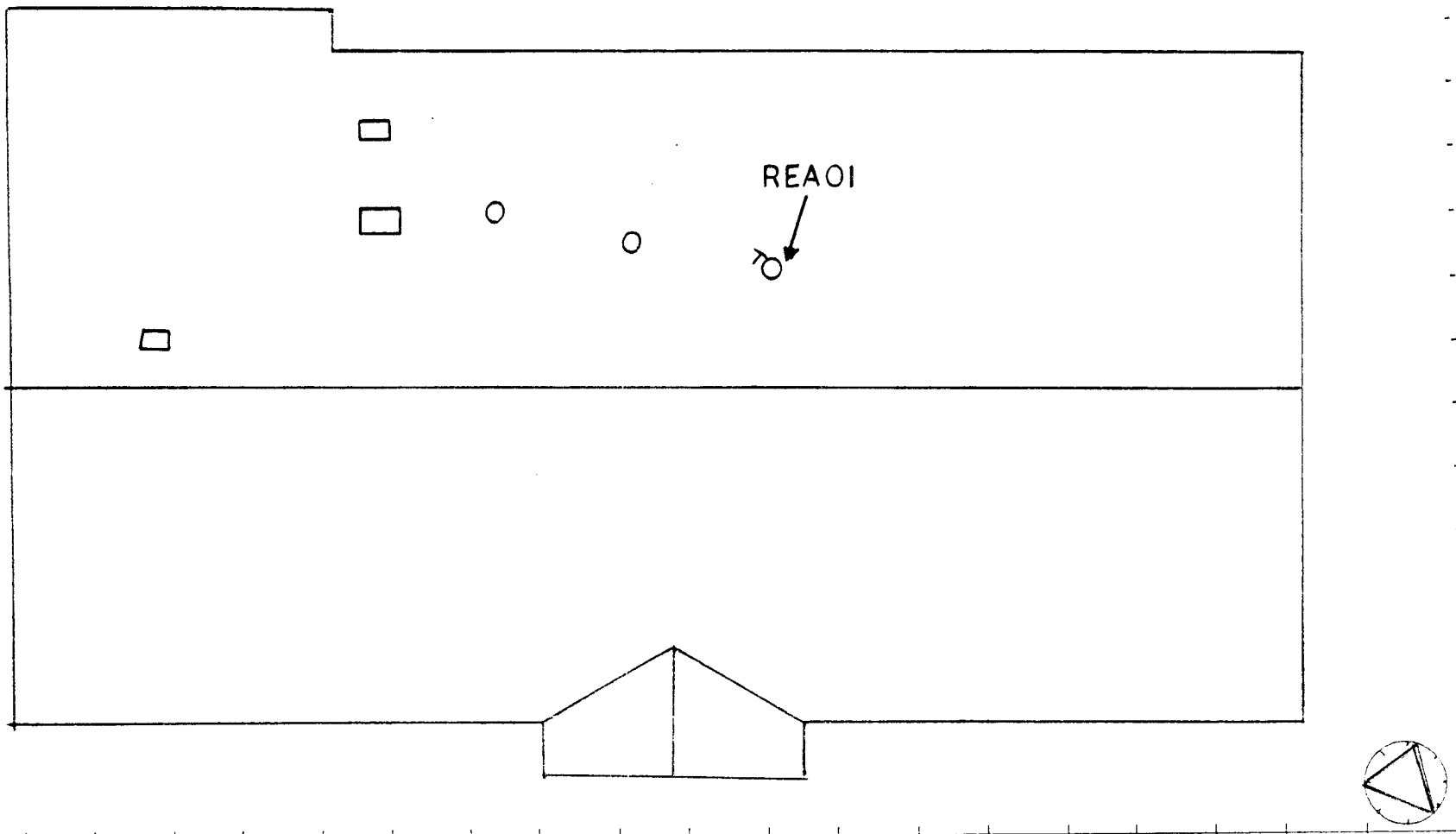
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		REA01	EXHAUST JOINT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY _____

FACILITY _____

FACILITY DESCRIPTION _____

FUNCTIONAL SPACE NO. 12

HOMOGENOUS AREA NO. _____

INSPECTOR _____

DATE _____

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. THREE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: VINYL BASE COVE

Approximate Amount of Material (linear of square ft.): 50 LN.FT

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	CORRIDOR	BC008	VINYL BASE COVE - BLACK	NAD	
ONE	CORRIDOR	BC009	VINYL BASE COVE - BLACK	NAD	

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

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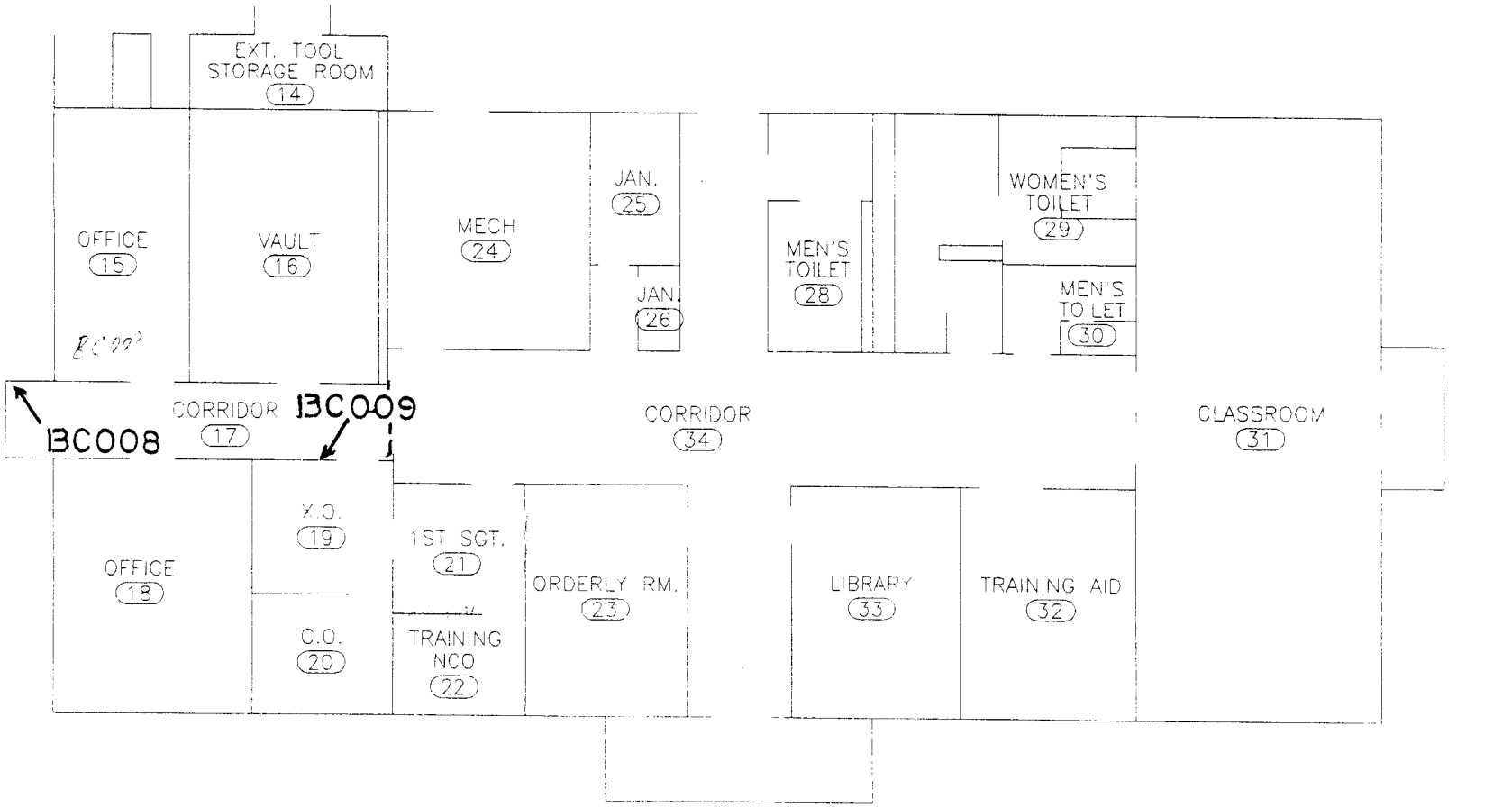


FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN BLDG

FUNCTIONAL SPACE NO. 3

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

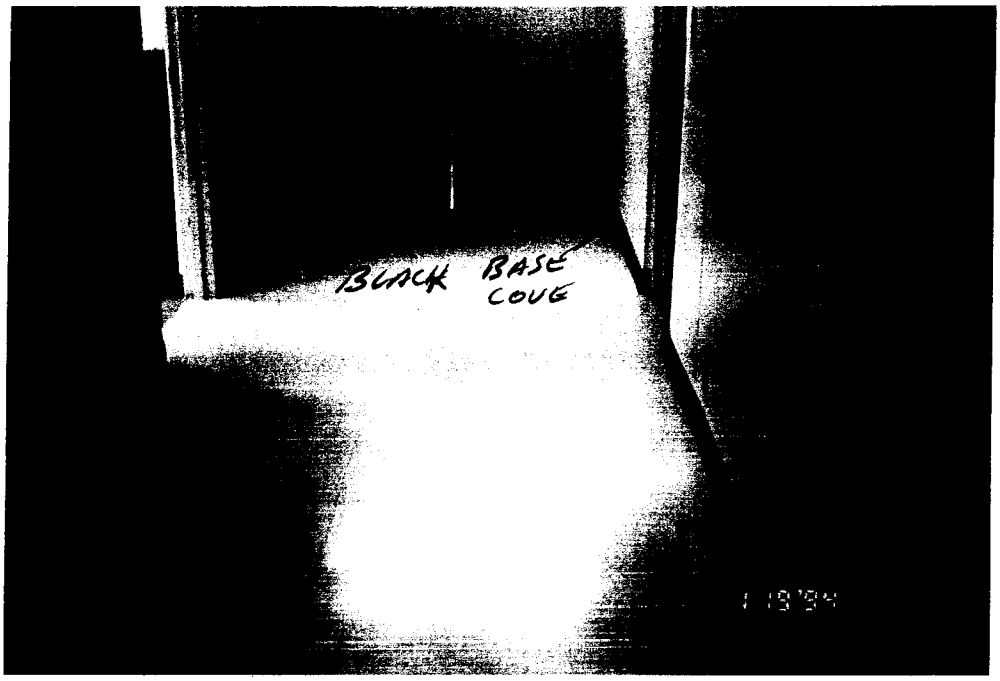
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. THREE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: VINYL BASE COVE (BLACK)



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. FOUR **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ **Description:** GYPSUM BOARD

Approximate Amount of Material (linear of square ft.): 488 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

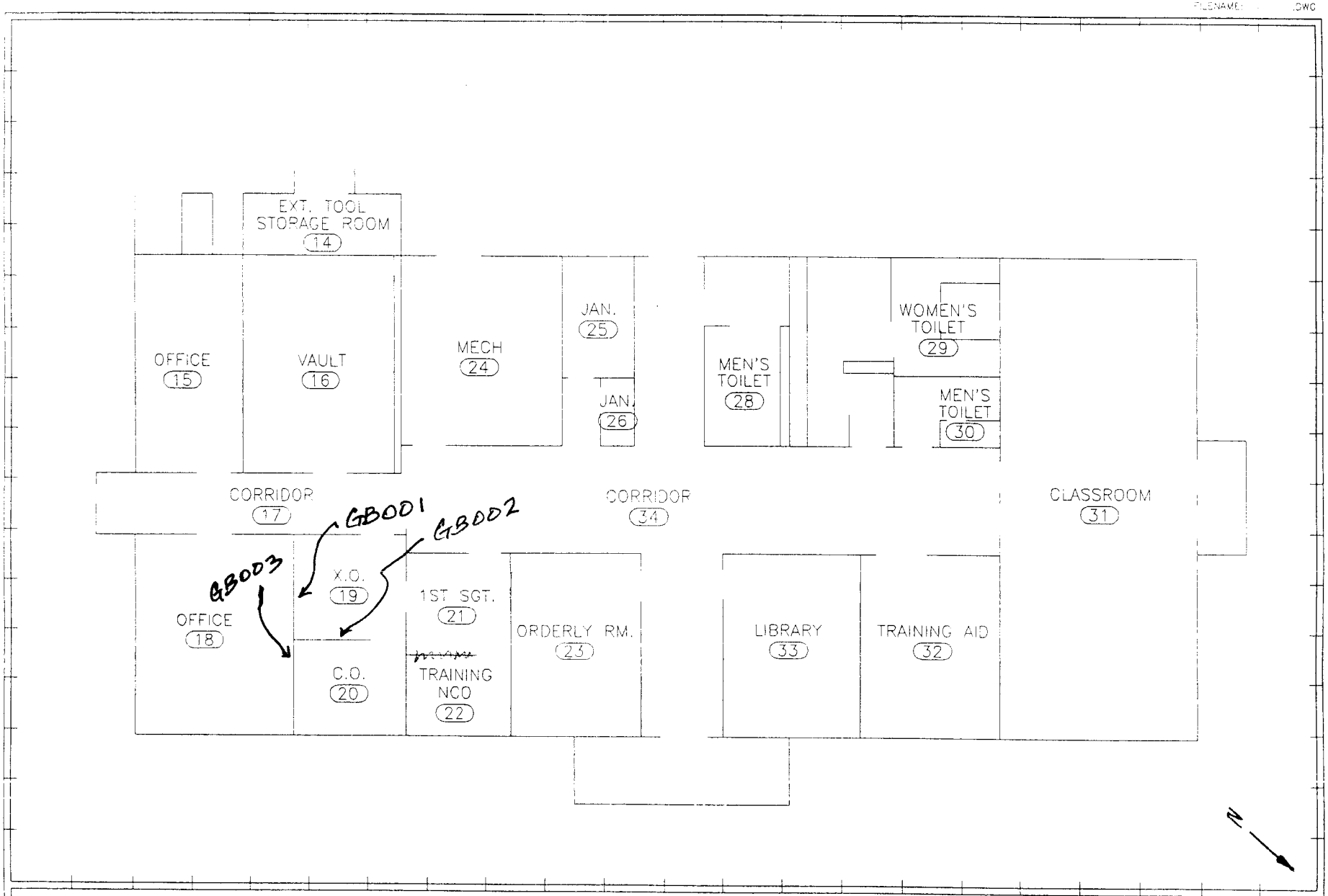
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	19	GB001	GYPSUM WALL BOARD	NAD	
ONE	19	GB002	GYPSUM WALL BOARD	NAD	
ONE	18	GB003	GYPSUM WALL BOARD	NAD	

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

GYPSUM BOARD

ACTIVITY: USAR CTR. HILO

FACILITY:

FACILITY DESCRIPTION: ADMIN. BLDG

FUNCTIONAL SPACE NO.: 4

HOMOGENOUS AREA NO.:

INSPECTOR: R. FORD, E. FUJIMOTO

DATE: 1/18/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. FIVE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: ACOUSTIC TILE

Approximate Amount of Material (linear of square ft.): 160 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

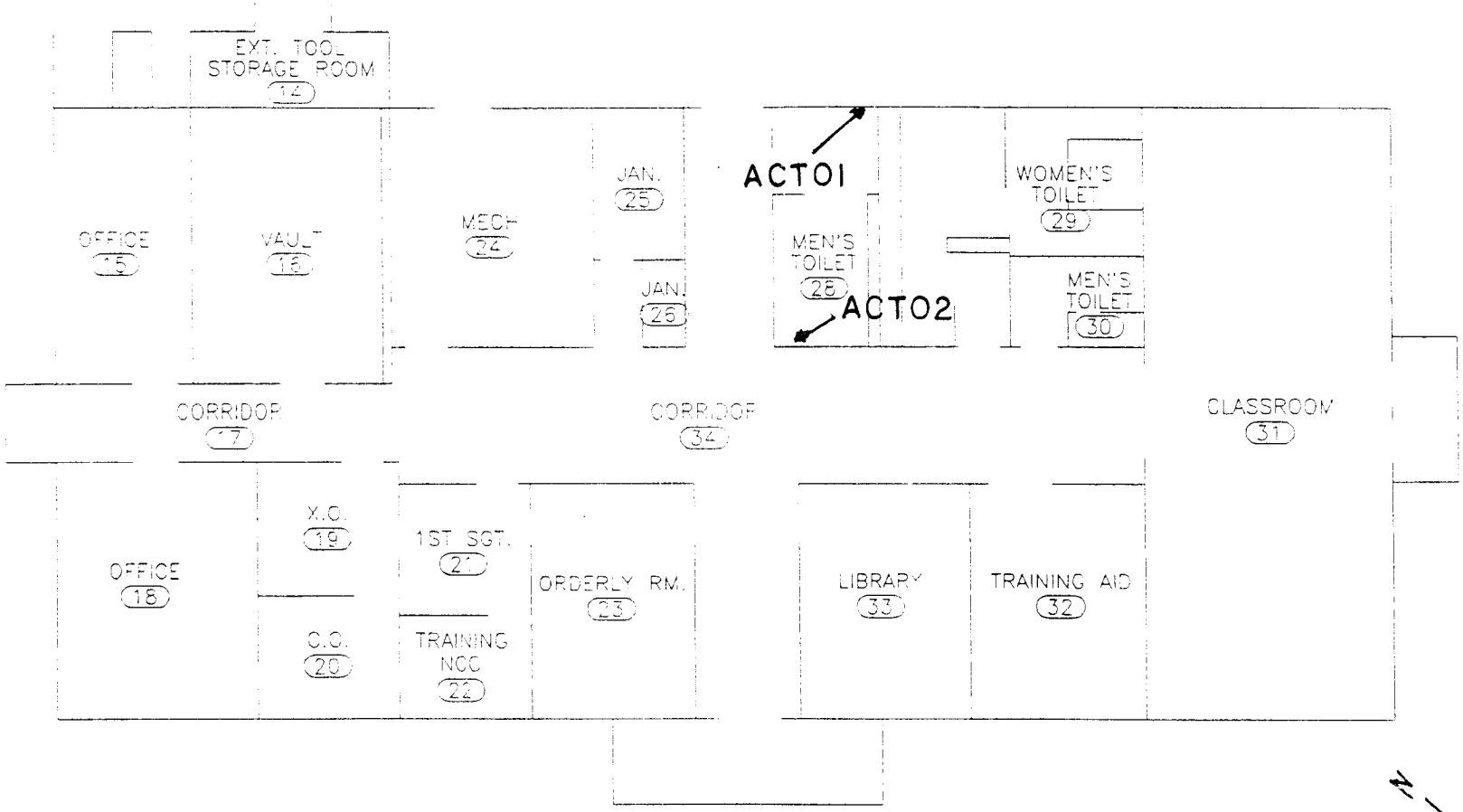
Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	28	ACT01	2'X4' ACOUSTIC CEILING TILE	NAD	
ONE	28	ACT02	2'X4' ACOUSTIC CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

FILENAME DWG



FLOOR PLAN FOR ACBM SAMPLES **ACOUSTIC CEILING TILE 2'X4'**

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 5

HOMOGENOUS AREA NO.

INSPECTOR R. FOLD E. FUJIMOTO

DATE 1/18/90

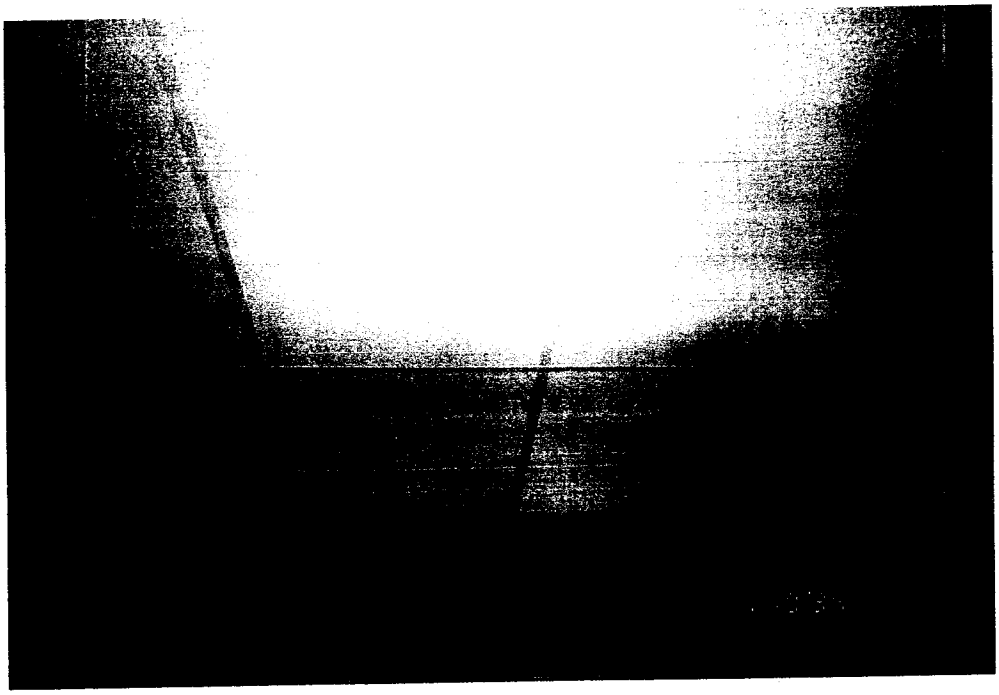
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. FIVE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: ACOUSTIC TILE



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. ONE **Description:** FLOOR TILE

Approximate Amount of Material (linear of square ft.): 3,160 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

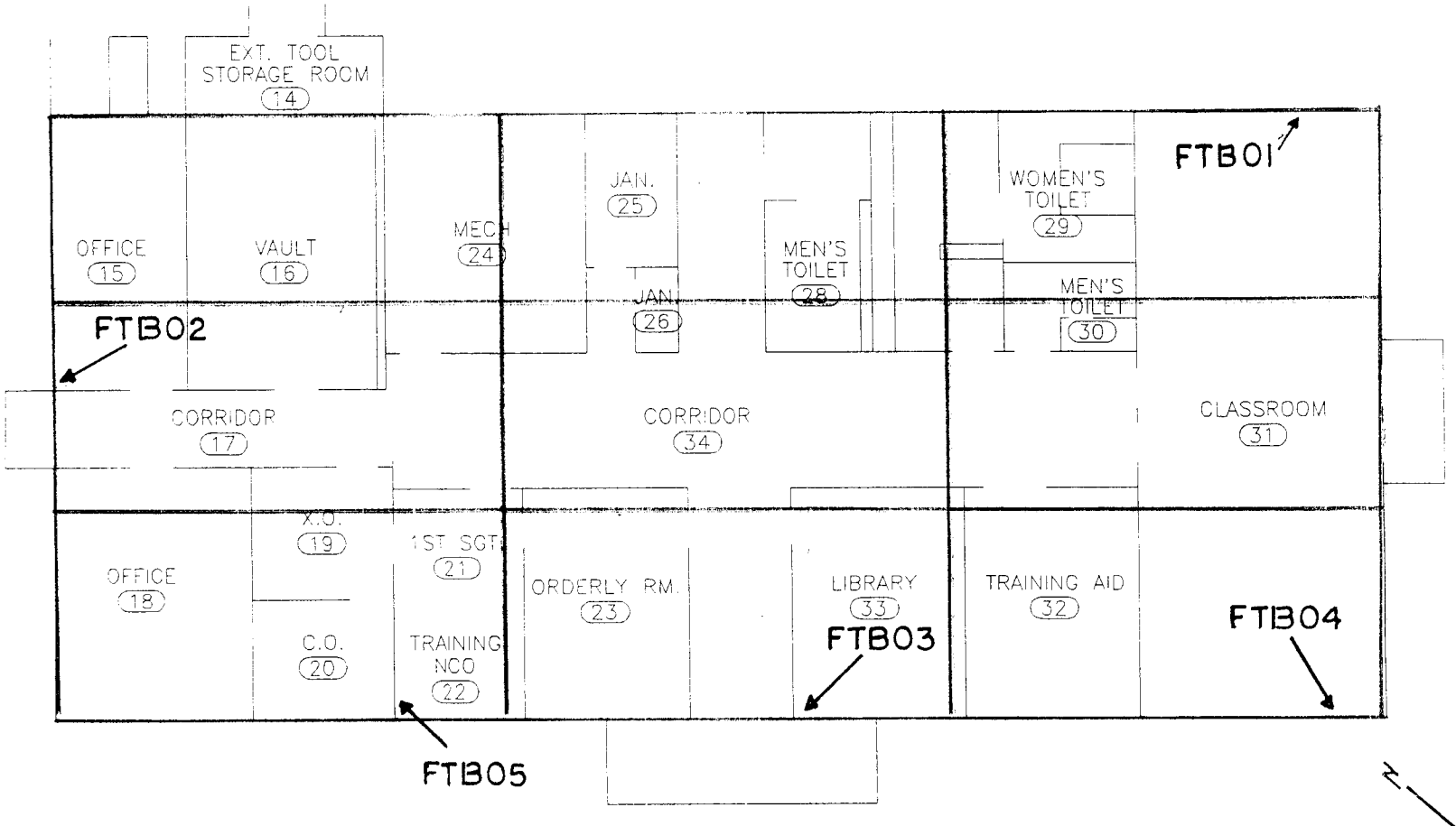
Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	31	FTB01	12"X12" BEIGE FLOOR TILE	NAD	
ONE	15	FTB02	12"X12" BEIGE FLOOR TILE	NAD	
ONE	33	FTB03	12"X12" BEIGE FLOOR TILE	NAD	
ONE	31	FTB04	12"X12" BEIGE FLOOR TILE	NAD	
ONE	22	FTB05	12"X12" BEIGE FLOOR TILE	NAD	

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94

#1



FLOOR PLAN FOR ACBM SAMPLES FLOOR TILE BEIGE

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 1

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/90

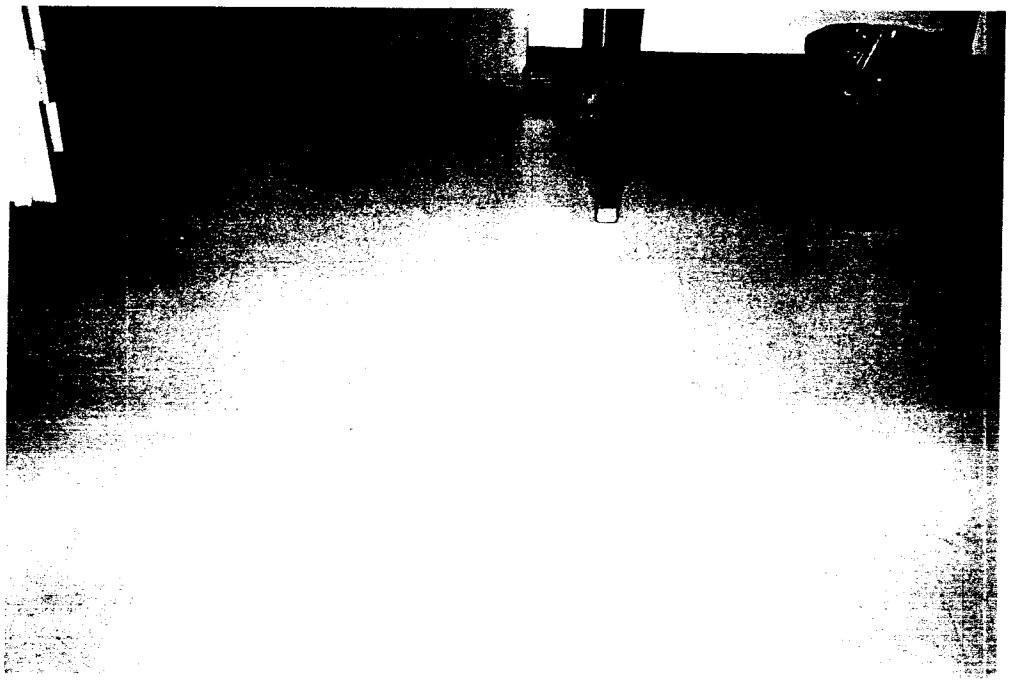
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. ONE Description: FLOOR TILE (BEIGE)



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

ype of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. TWO **Description:** FLOOR TILE

Approximate Amount of Material (linear of square ft.): 778 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

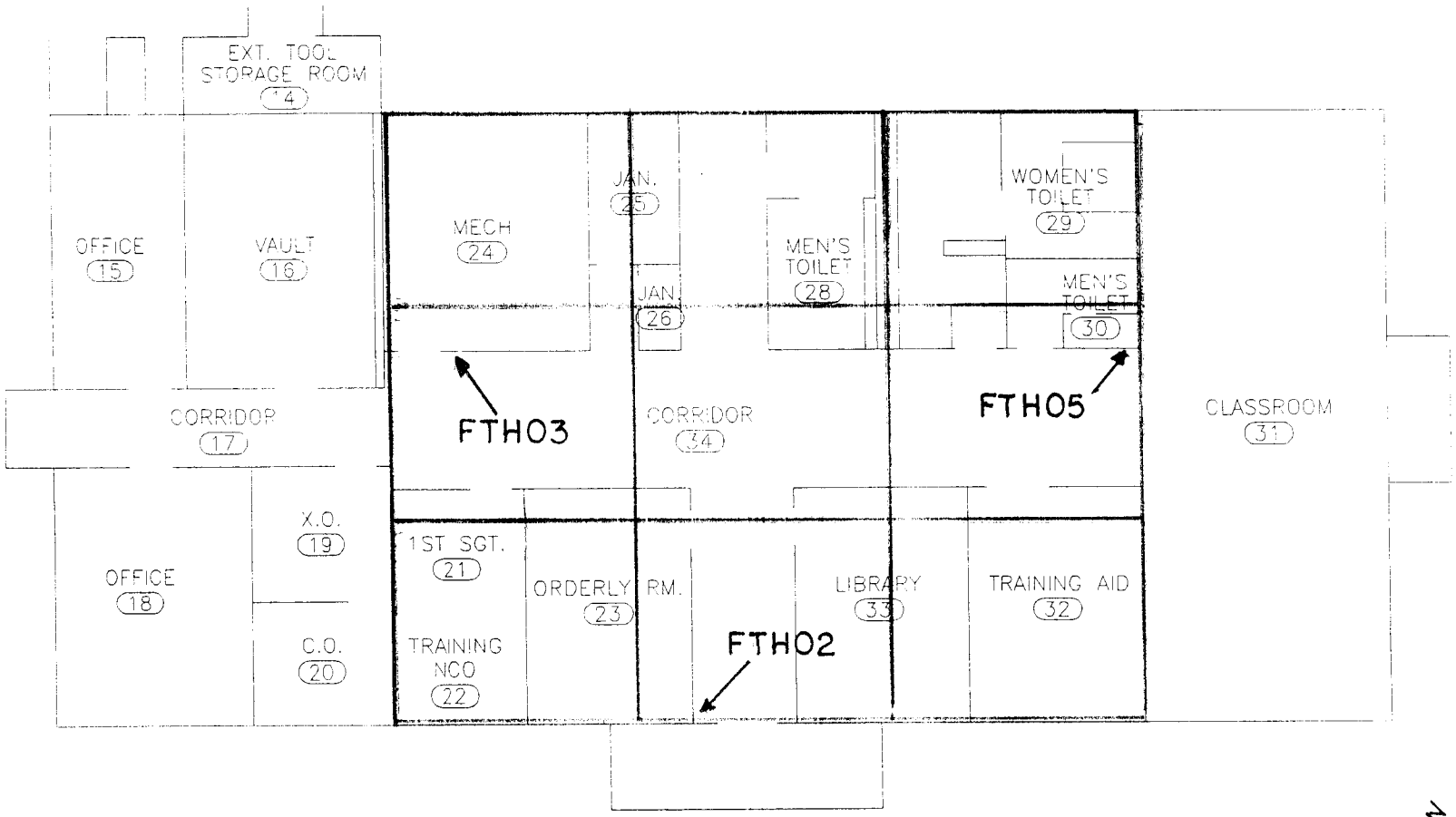
Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	CORRIDOR	FTH02	12"X12" BROWN FLOOR TILE	NAD	
ONE	CORRIDOR	FTH03	12"X12" BROWN FLOOR TILE	NAD	
ONE	CORRIDOR	FTH05	12"X12" BROWN FLOOR TILE	NAD	

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94

#2

FILENAME DWG



FLOOR PLAN FOR ACBM SAMPLES

FLOOR TILE BROWN

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 2

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

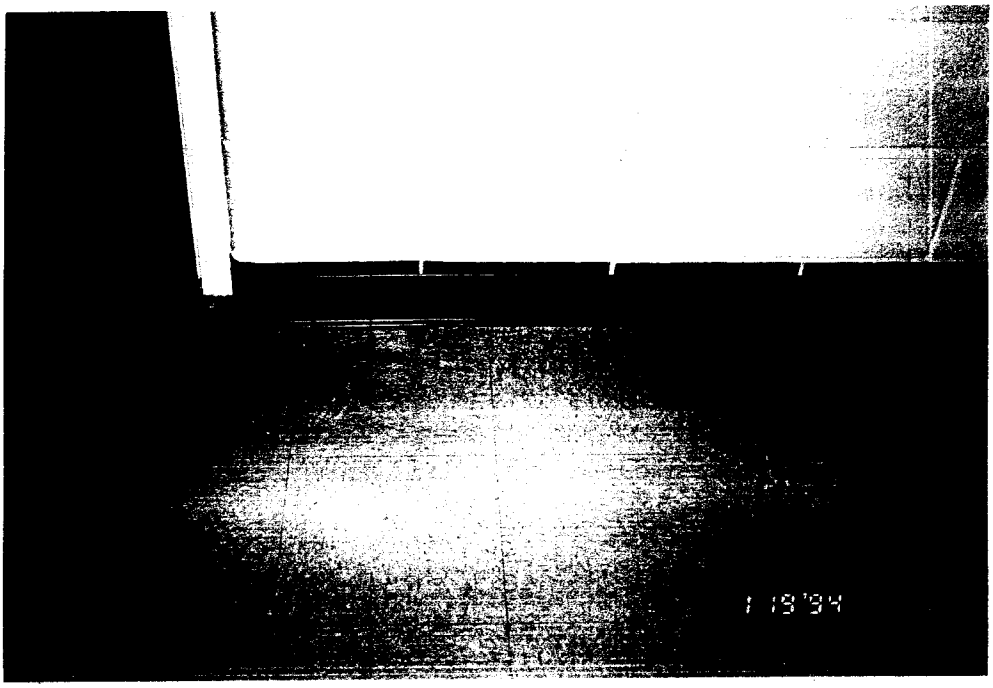
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. TWO Description: FLOOR TILE (LIGHT BROWN)



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. Type Location

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. THREE Description: VINYL BASE COVE

Approximate Amount of Material (linear of square ft.): 900 LN.FT

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description:

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description:

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description:

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

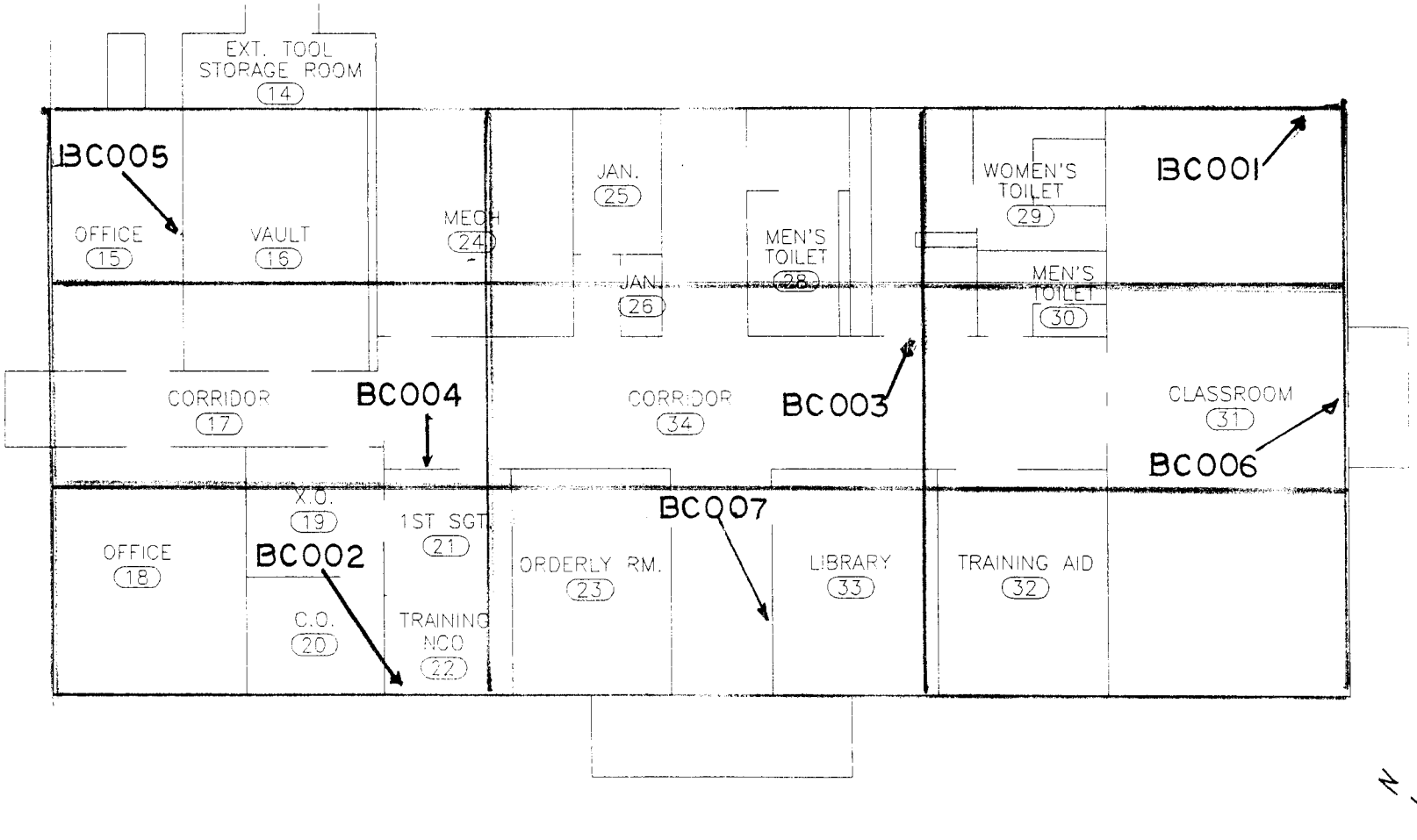
Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	THRUOUT	BC001	VINYL BASE COVE - BROWN	NAD	
ONE	THRUOUT	BC002	VINYL BASE COVE - BROWN		
ONE	THRUOUT	BC003	VINYL BASE COVE - BROWN		
ONE	THRUOUT	BC004	VINYL BASE COVE - BROWN		
ONE	THRUOUT	BC005	VINYL BASE COVE - BROWN		
ONE	THRUOUT	BC006	VINYL BASE COVE - BROWN		
ONE	THRUOUT	BC007	VINYL BASE COVE - BROWN		

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

#7

FILENAME: .DWG



FLOOR PLAN FOR ACBM SAMPLES

FLOOR MOLDING

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 3

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

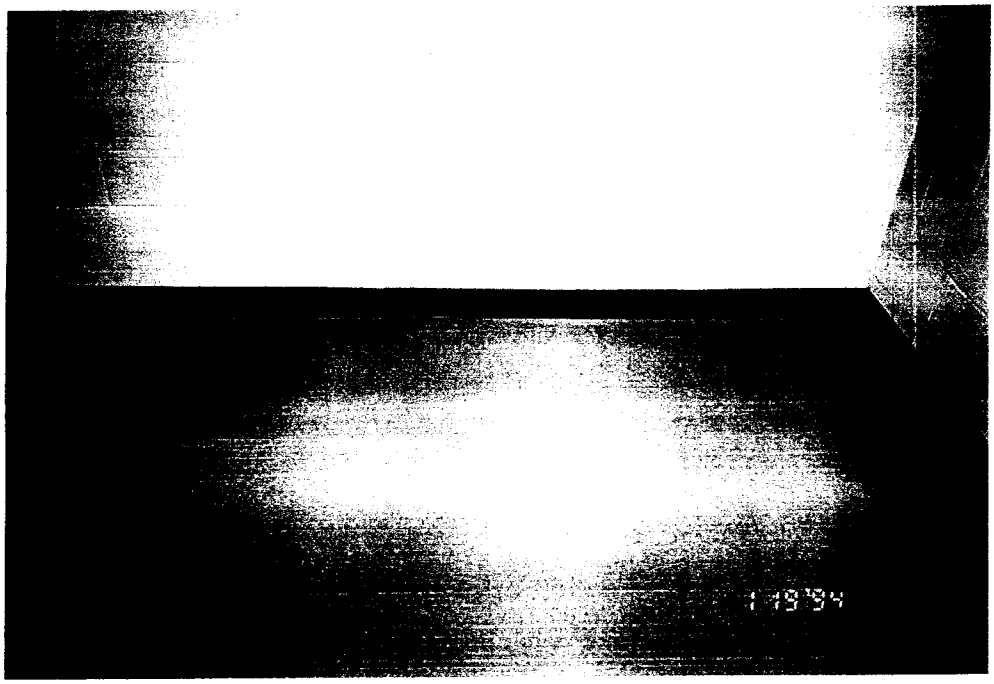
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. THREE Description: VINYL BASE COVE



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. Type Location

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. FOUR Description: CEILING TILE

Approximate Amount of Material (linear of square ft.): 1,128 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description:

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description:

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description:

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

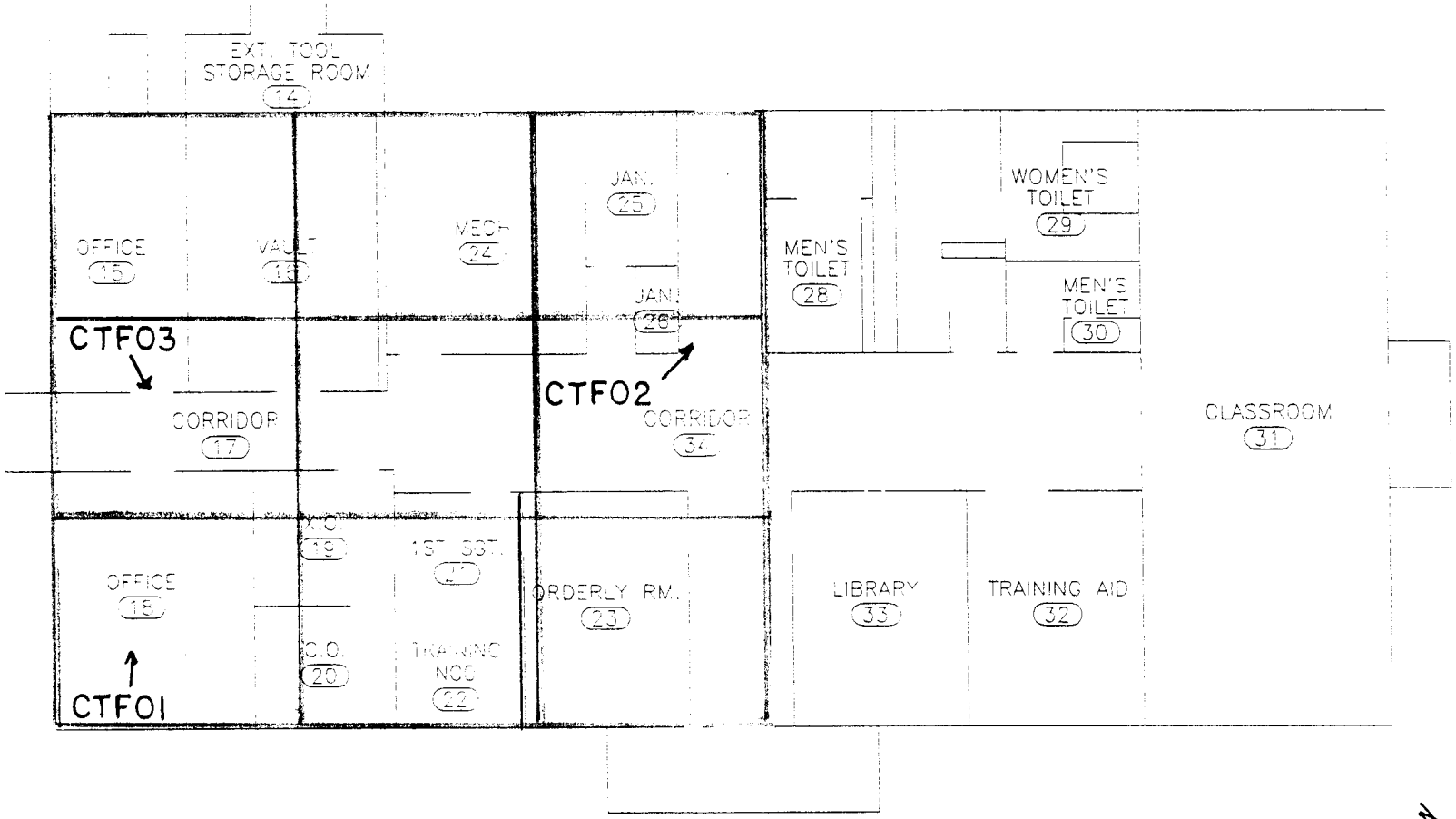
Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	18	CTF01	2'X4' FIBERGLASS CEILING TILE	NAD	
ONE	CORRIDOR/34	CTF02	2'X4' FIBERGLASS CEILING TILE	NAD	
ONE	15	CTF03	2'X4' FIBERGLASS CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

FILENAME HILO 3

#4



CTF

FLOOR PLAN FOR ACBM SAMPLES

FIBERGLASS CEILING TILE 2'X4'

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 4

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

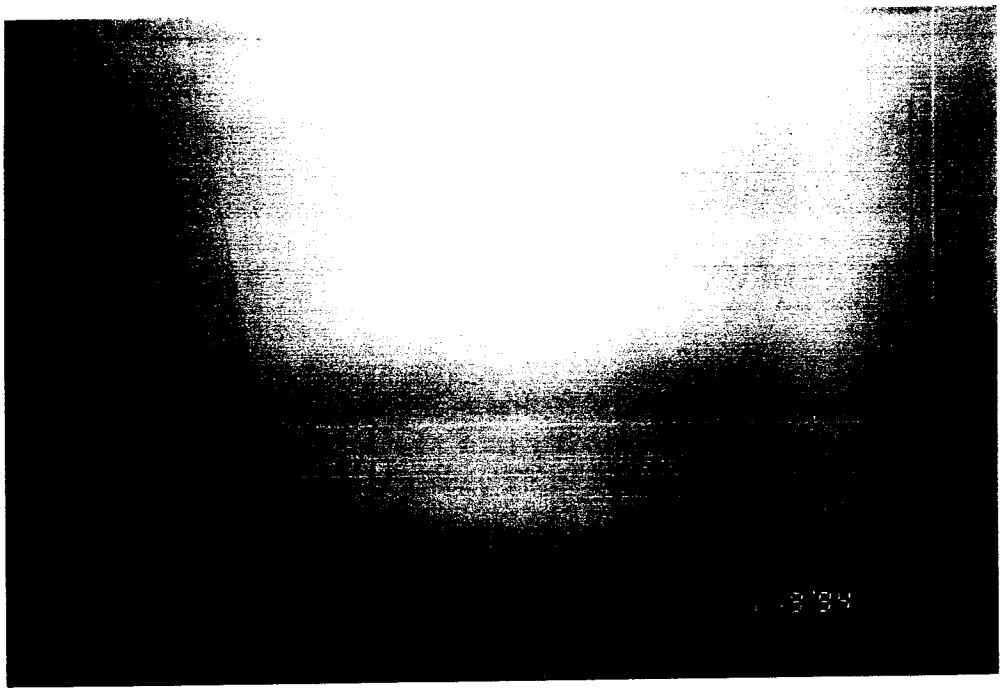
RECORDING FORM FOR ASSESSMENT
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. FOUR Description: FIBERGLASS CEILING TILE



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. FIVE **Description:** GYPSUM BOARD

Approximate Amount of Material (linear of square ft.): 630 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

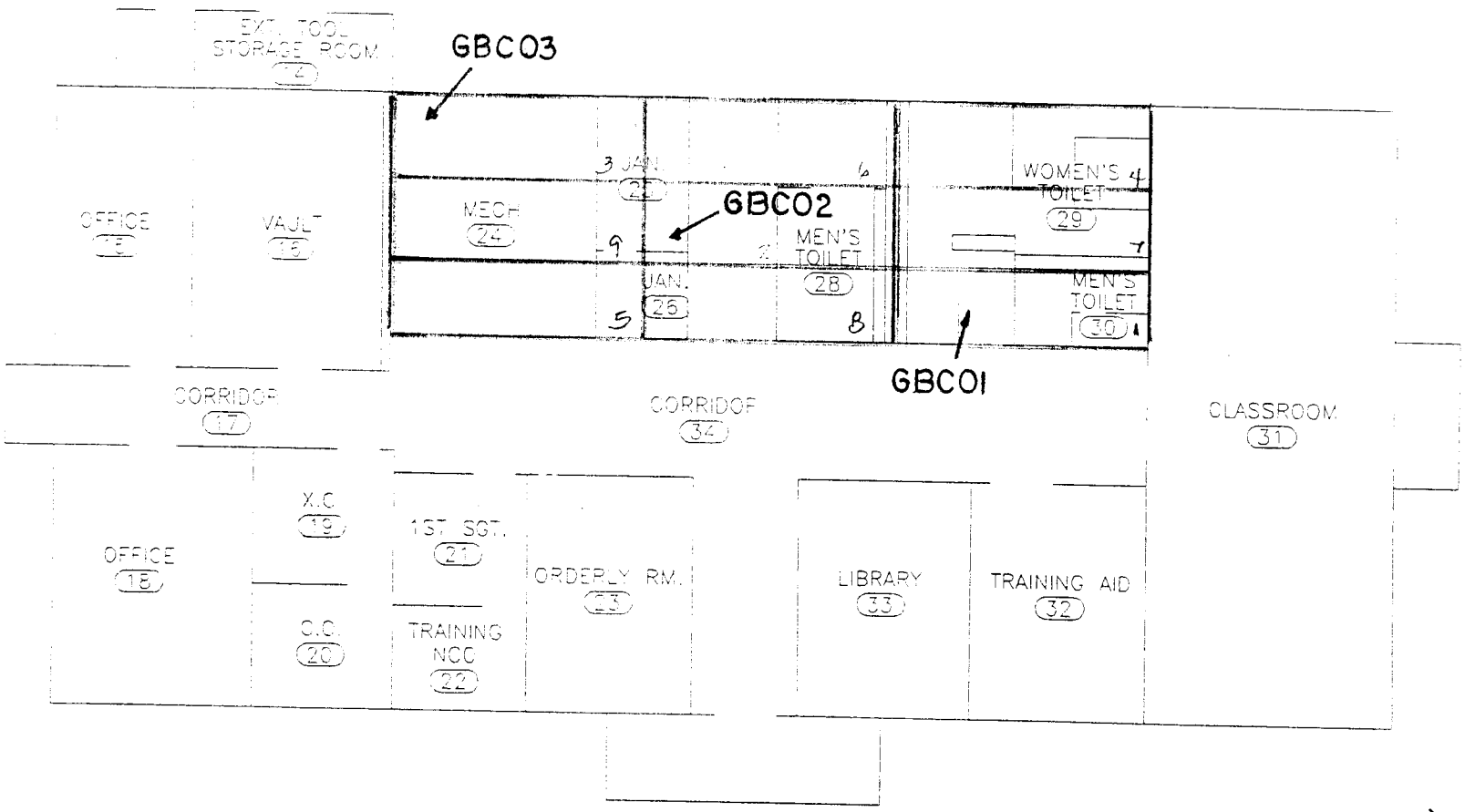
Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	29	GBC01	GYPSUM BOARD CEILING	NAD	
ONE	25	GBC02	GYPSUM BOARD CEILING	NAD	
ONE	24	GBC03	GYPSUM BOARD CEILING	NAD	

Inspector R. Ford / E. Fujimoto **Date** 18-Jan-94

FILENAME

#9



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 5

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

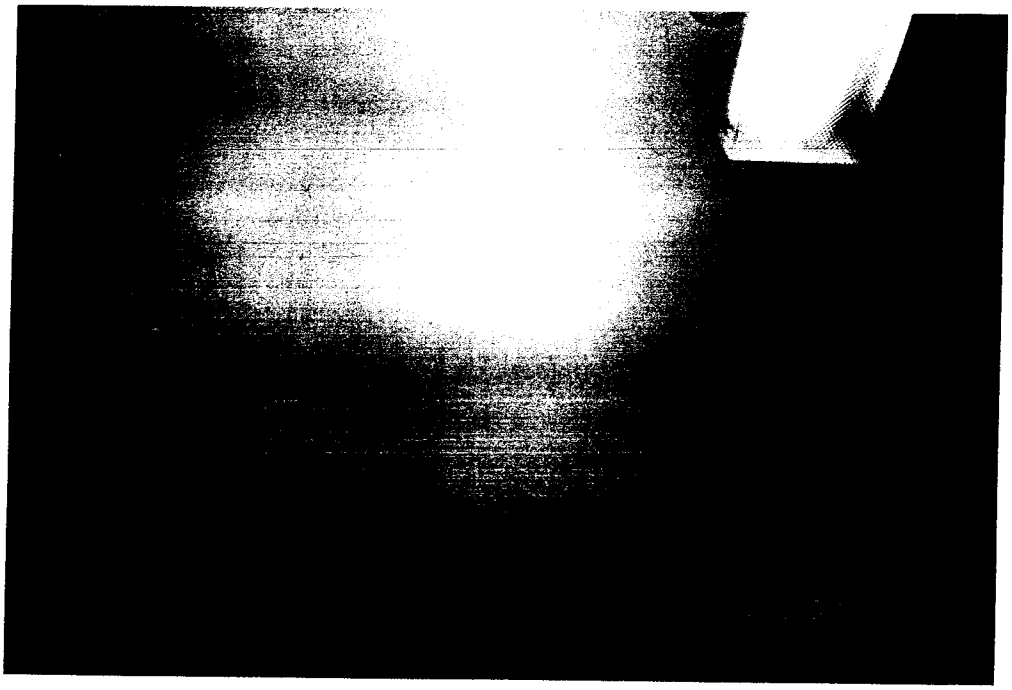
RDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. FIVE Description: GYPSUM BOARD CEILING



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. SIX Description: ACOUSTIC TILE

Approximate Amount of Material (linear of square ft.): 3,160 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

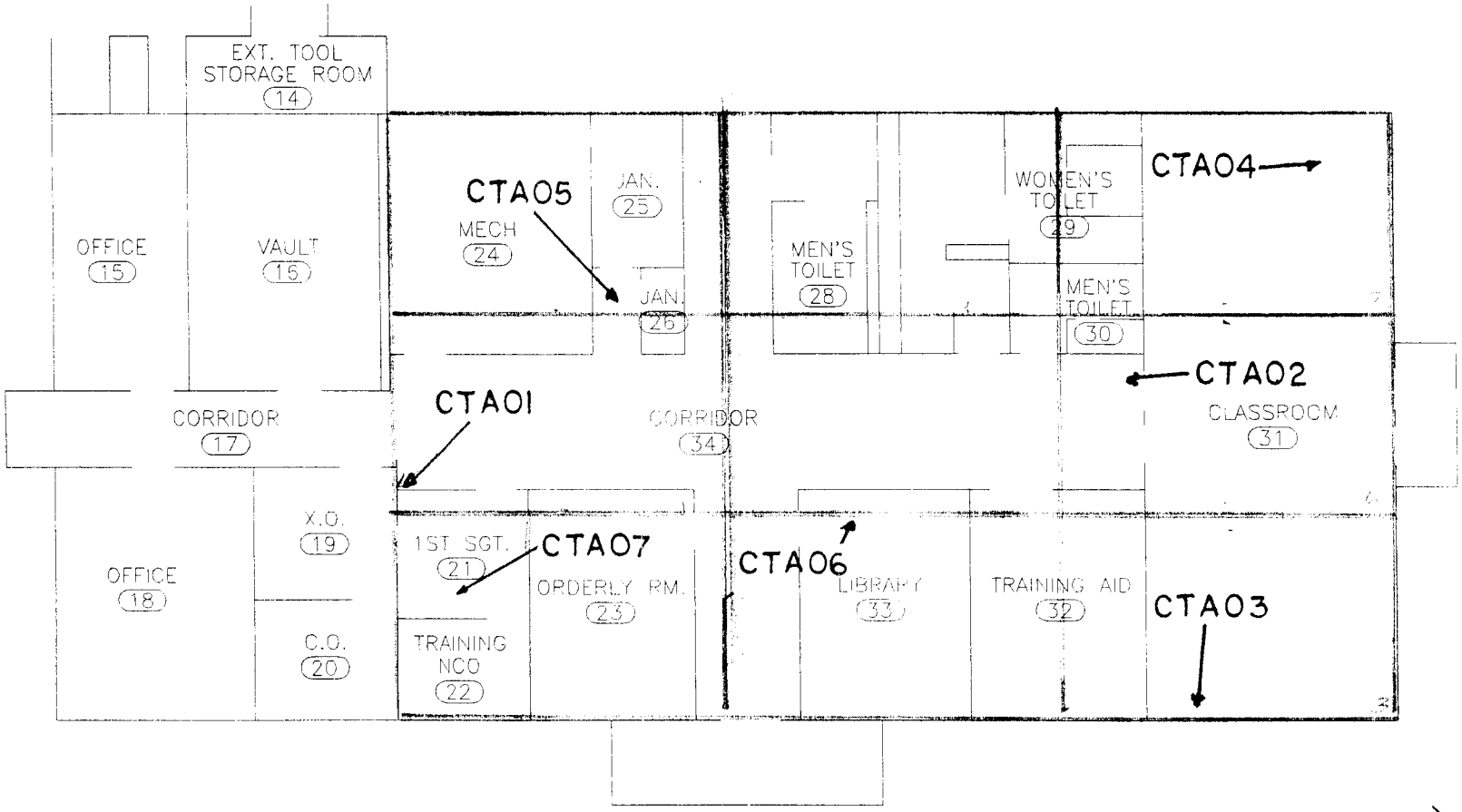
Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	CORRIDOR	CTA01	12"X24" ACOUSTIC CEILING TILE	NAD	
ONE	CORRIDOR	CTA02	12"X24" ACOUSTIC CEILING TILE		
ONE	31	CTA03	12"X24" ACOUSTIC CEILING TILE		
ONE	31	CTA04	12"X24" ACOUSTIC CEILING TILE		
ONE	CORRIDOR	CTA05	12"X24" ACOUSTIC CEILING TILE		
ONE	33	CTA06	12"X24" ACOUSTIC CEILING TILE		
ONE	21	CTA07	12"X24" ACOUSTIC CEILING TILE		

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

FILENAME .DWG



FLOOR PLAN FOR ACBM SAMPLES CEILING TILE 1'X 2'

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 6

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/20/94

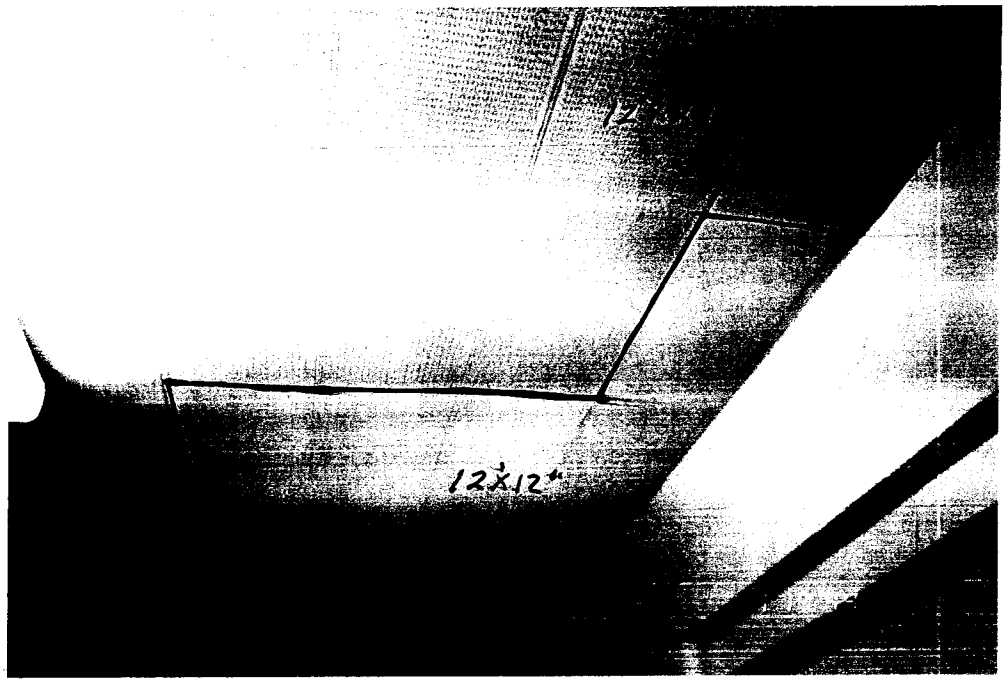
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. SIX Description: ACOUSTIC CEILING TILE



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [X] TSI [ ] Other

Homogeneous Area No. SEVEN Description: FIBERGLASS INSULATION

Approximate Amount of Material (linear of square ft.): 325 LN.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

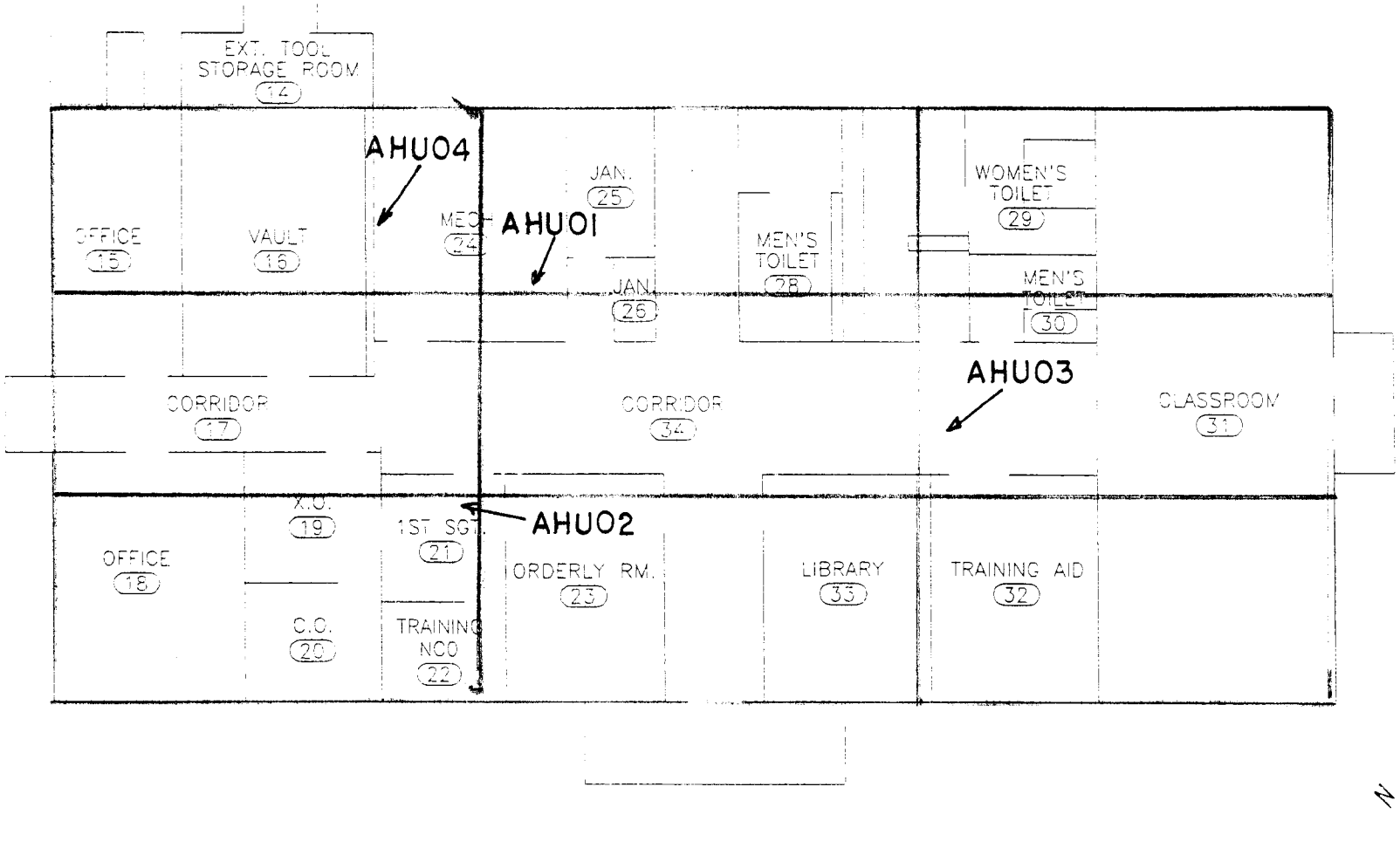
Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	21	AHU01	FIBERGLASS INSULATION - DUCTS	NAD	
ONE	24	AHU02	FIBERGLASS INSULATION - DUCTS	NAD	
ONE	CORRIDOR	AHU03	FIBERGLASS INSULATION - DUCTS	NAD	
ONE	24	AHU04	FIBERGLASS INSULATION - DUCTS	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

#4

FILENAME: HILL .DWG



FLOOR PLAN FOR ACBM SAMPLES AHU INSULATION FIBERGLASS

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 7

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/19/94

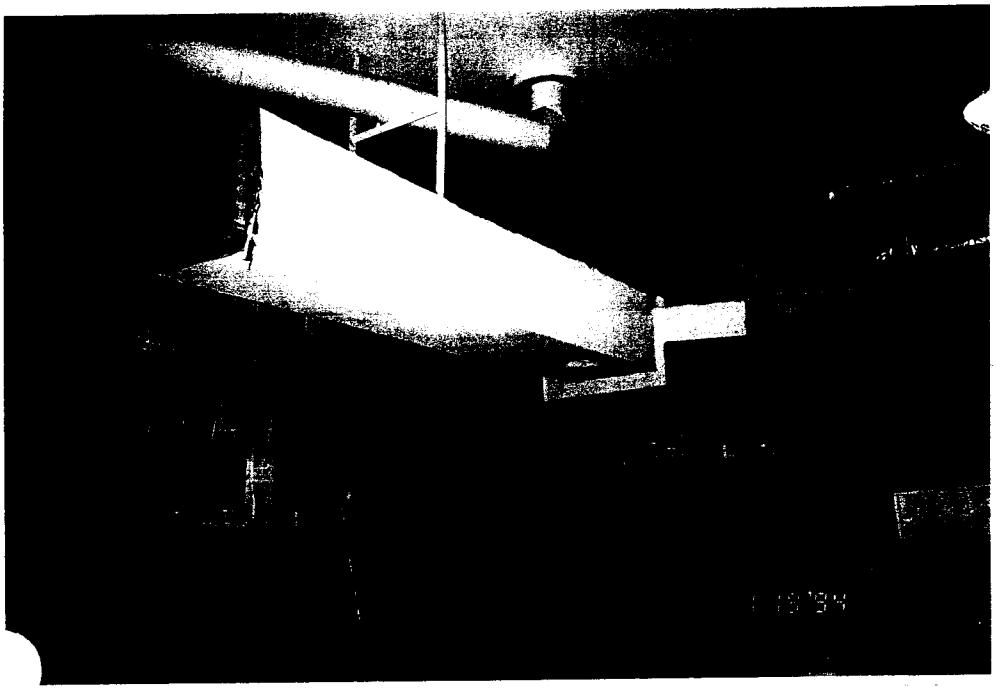
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HKO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. SEVEN Description: FIBERGLASS INSULATION



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. EIGHT Description: ROOF MASTIC

Approximate Amount of Material (linear of square ft.): 6,789 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

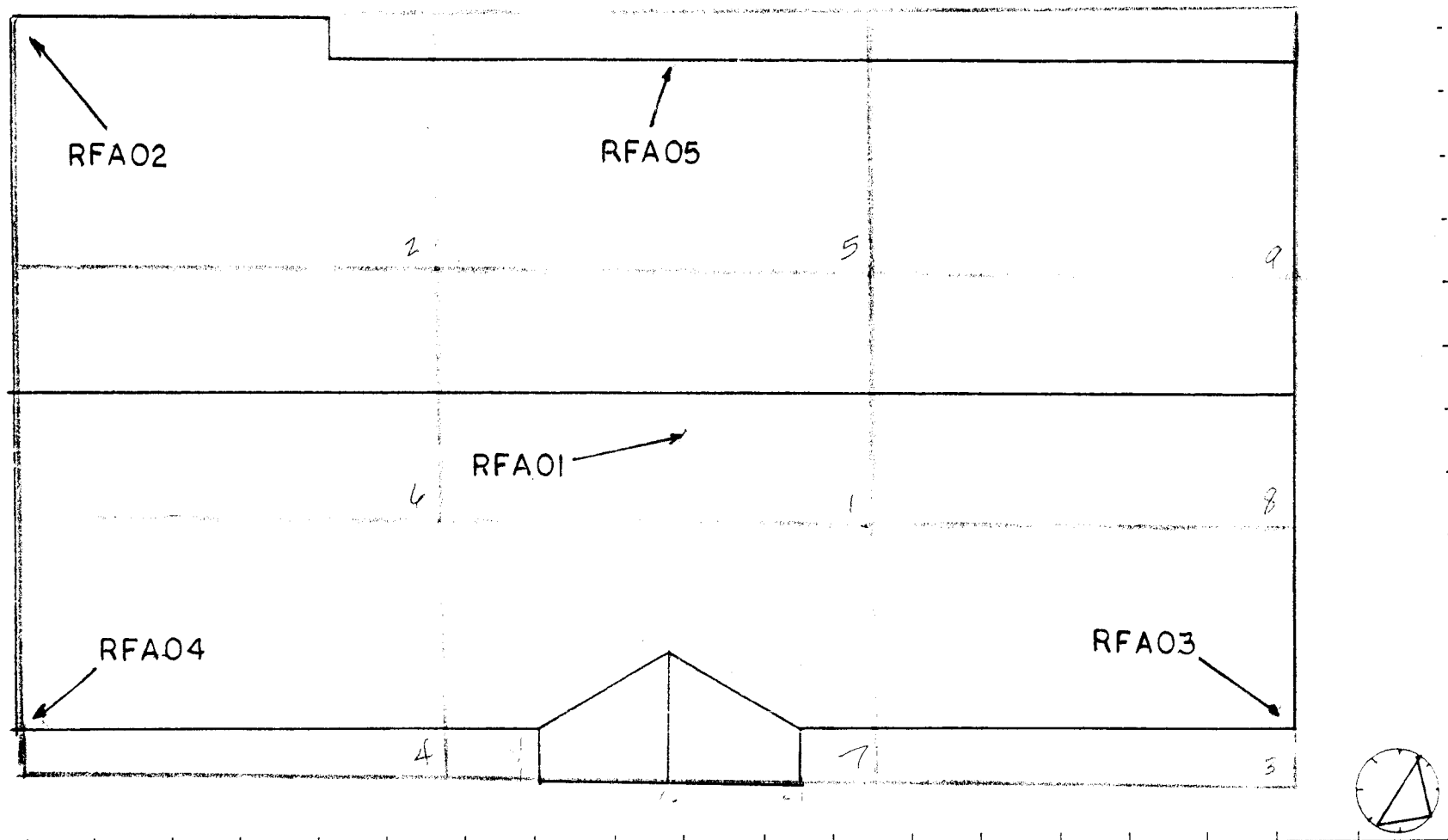
Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		RFA01	ROOF FELT AND MASTIC	NAD	
ROOF		RFA02	ROOF FELT AND MASTIC	NAD	
ROOF		RFA03	ROOF FELT AND MASTIC	NAD	
ROOF		RFA04	ROOF FELT AND MASTIC	NAD	
ROOF		RFA05	ROOF FELT AND MASTIC	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94

#13



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 8

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. EIGHT Description: ROOF MASTIC/FELT

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HWAII

Functional Space No. Type Location

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. Description: ACOUSTIC TILE

Approximate Amount of Material (linear or square ft.): 48 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description:

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description:

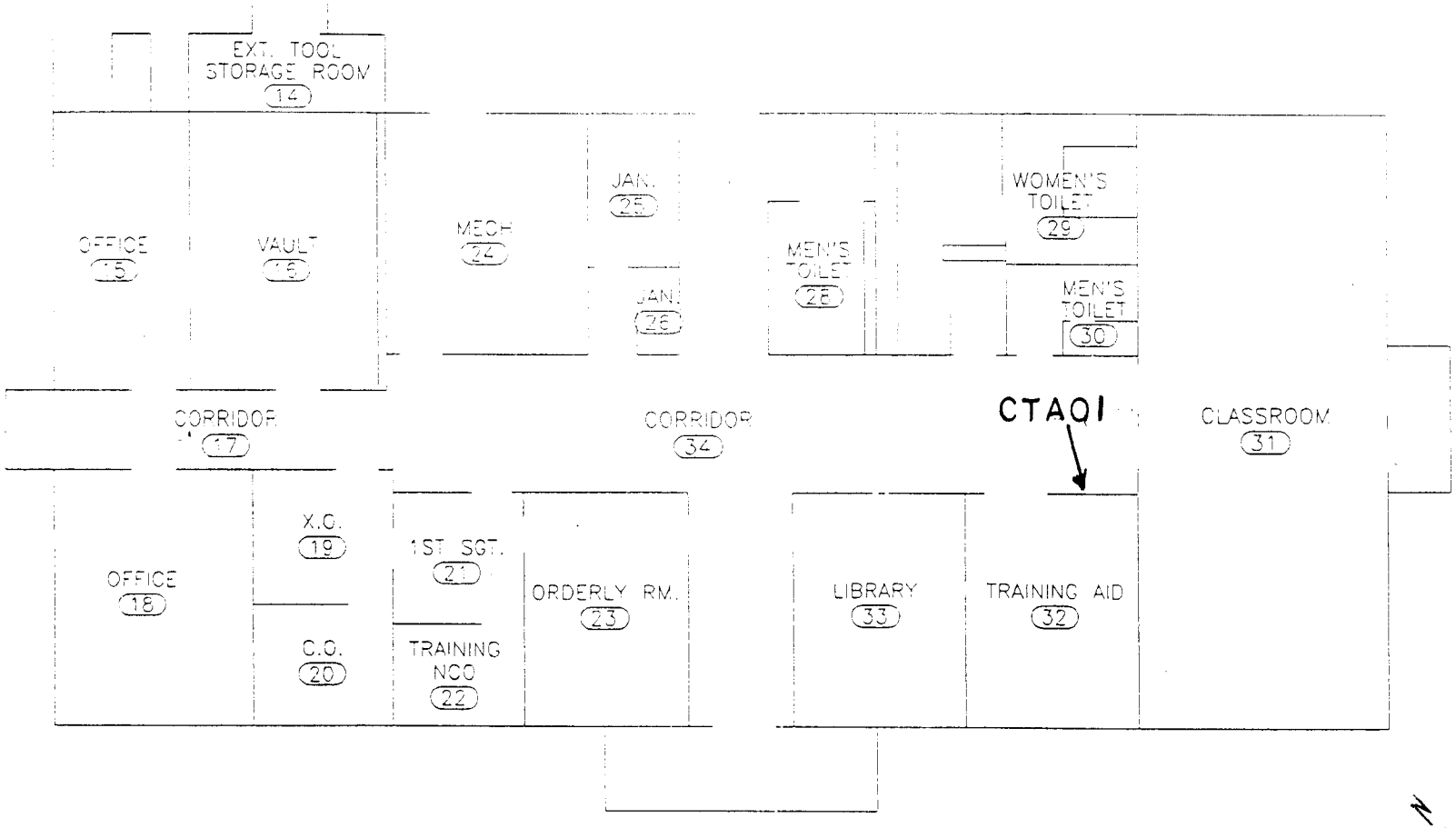
Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	CORRIDOR	CTA01	12"X12" ACOUSTIC CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 18-Jan-94

FILENAME HIL 3



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 6

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/18/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. SEVEN Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: CERAMIC TILE

Approximate Amount of Material (linear of square ft.): 110 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

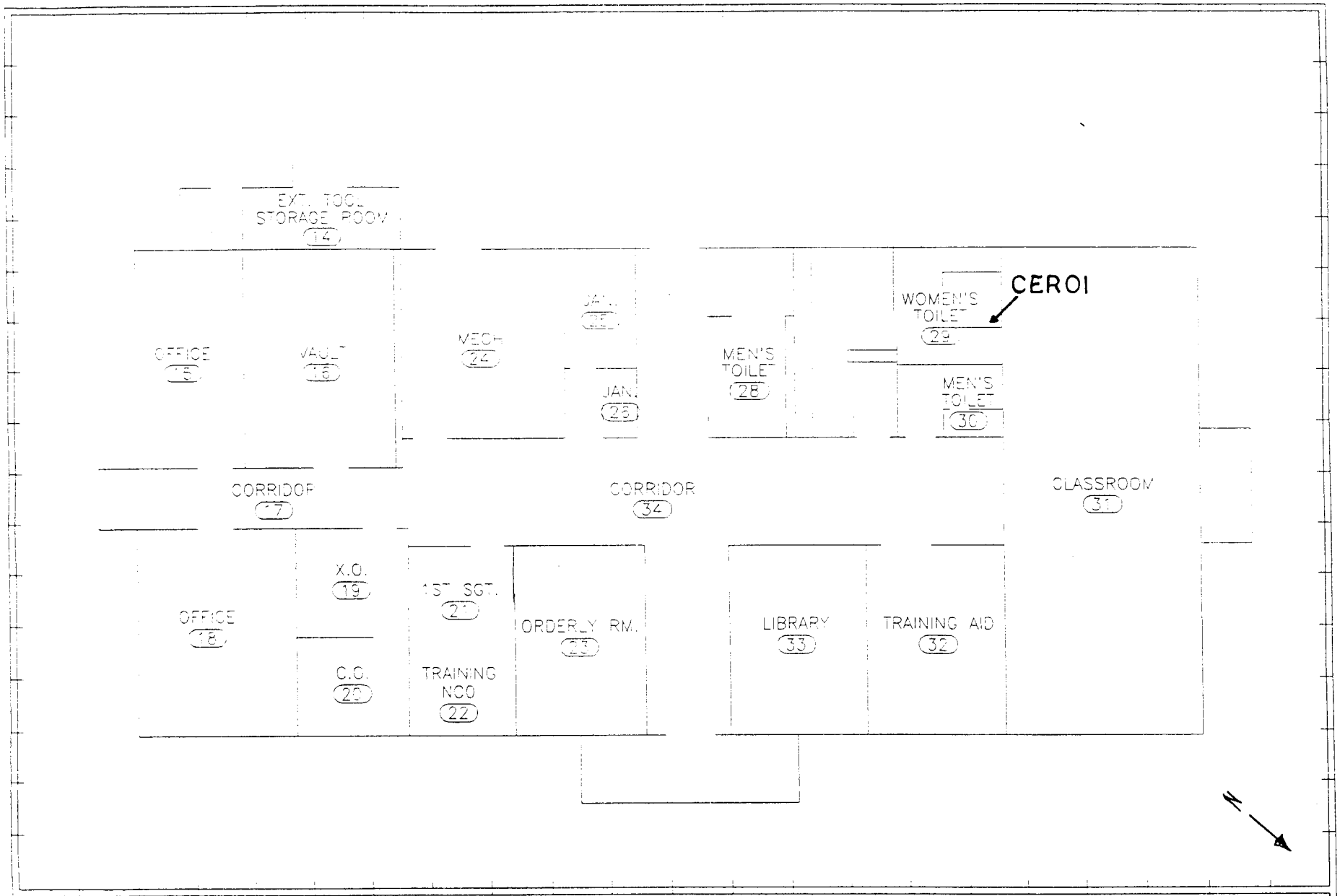
Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	29	CER01	2-1/4"X2-1/4" CERAMIC FLOOR TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 7

HOMOGENOUS AREA NO.

INSPECTOR R. FORD, E. FUJIMOTO

DATE 4/19/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. EIGHT Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: CERAMIC TILE

Approximate Amount of Material (linear of square ft.): 80 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

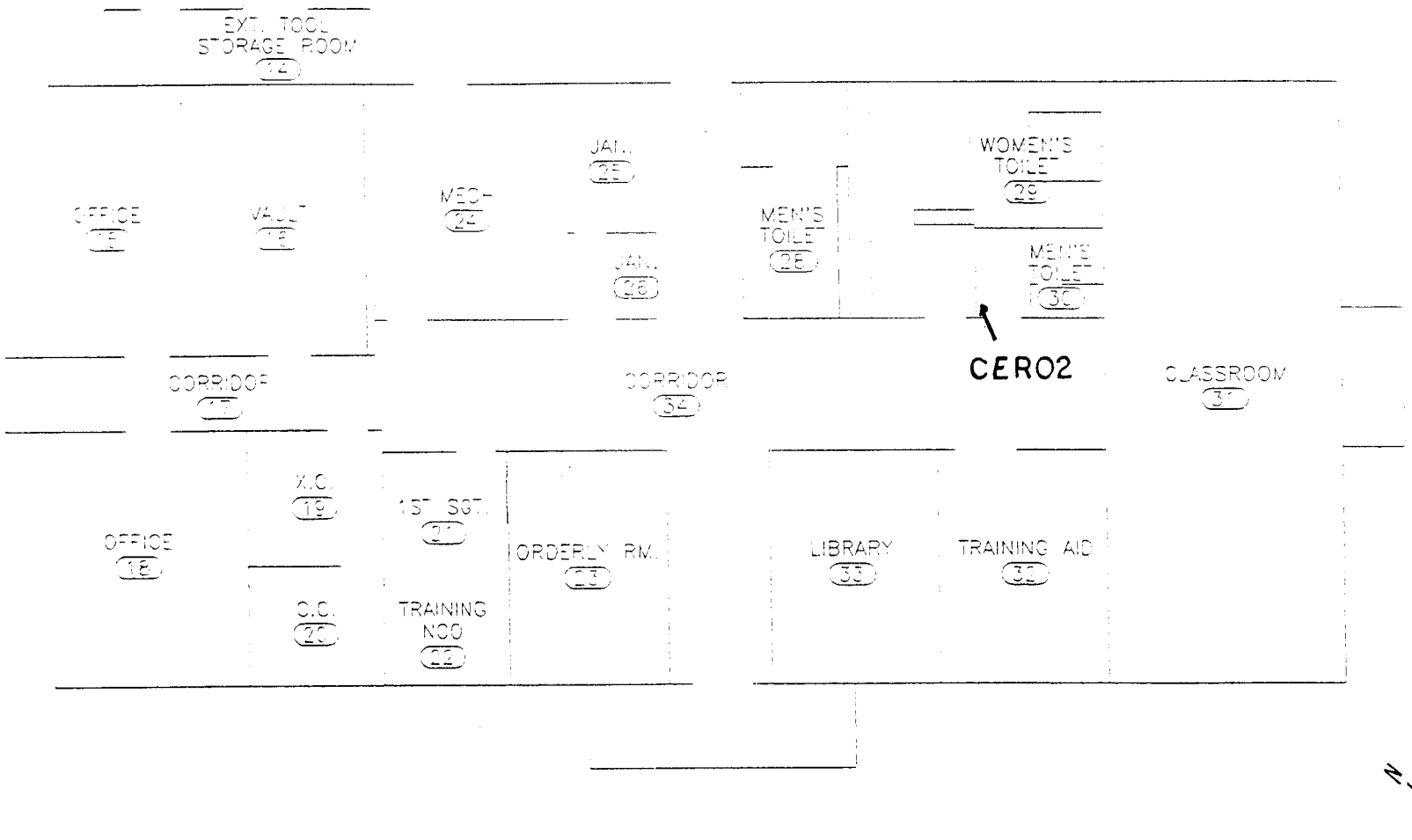
Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	30	CER02	2-1/4"X2-1/4" CERAMIC FLOOR TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

FILENAME HILOC1.DWG



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 8

HOMOGENOUS AREA NO.

INSPECTOR R. FORD / E. FUJIMOTO

DATE 1/19/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. NINE Type Location

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. Description: CHILL WATER INSULATION

Approximate Amount of Material (linear of square ft.): 78 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	24	ARM01	CHILL WATER LINE INSULATION	NAD	
ONE	24	ARM02	CHILL WATER LINE INSULATION	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. TEN **Type** **Location**

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. **Description:** HOT WATER INSULATION

Approximate Amount of Material (linear of square ft.): 90 LN.FT

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	24	HW001	HOT WATER LINE INSULATION	NAD	

Inspector R. Ford / E. Fujimoto **Date** 19-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. ELEVEN Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. _____ Description: VIBRATION JOINT

Approximate Amount of Material (linear of square ft.): 44 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

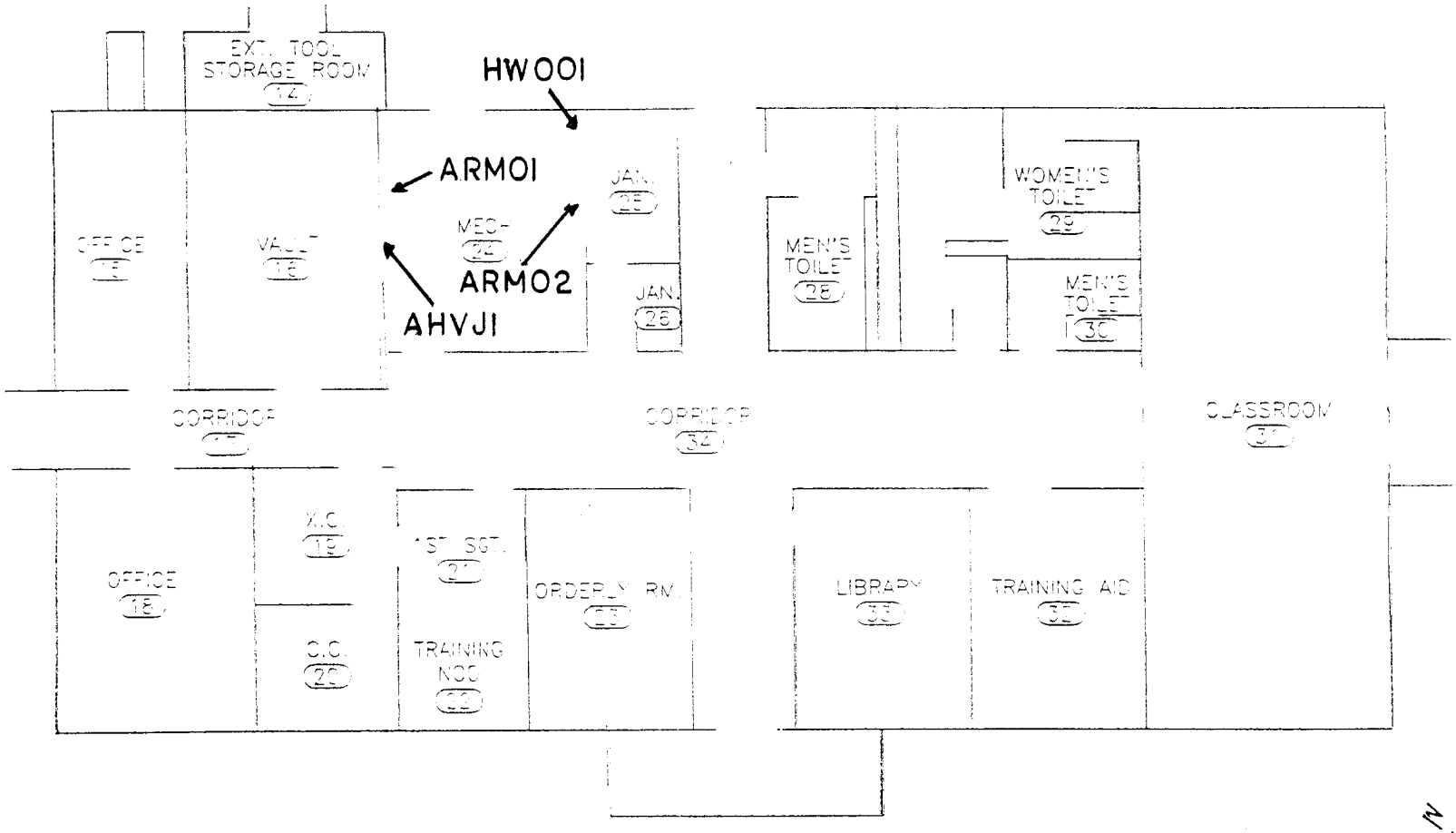
Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	24	AHVJ1	VIBRATION JOINT	NAD	

Inspector R. Ford / E. Fujimoto Date 20-Jan-94

FILENAME HILOG.DWG



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ADMIN. BLDG

FUNCTIONAL SPACE NO. 8-9-10-11

HOMOGENOUS AREA NO.

INSPECTOR R. FORD / E. FURUHOTO

DATE 1/19/94

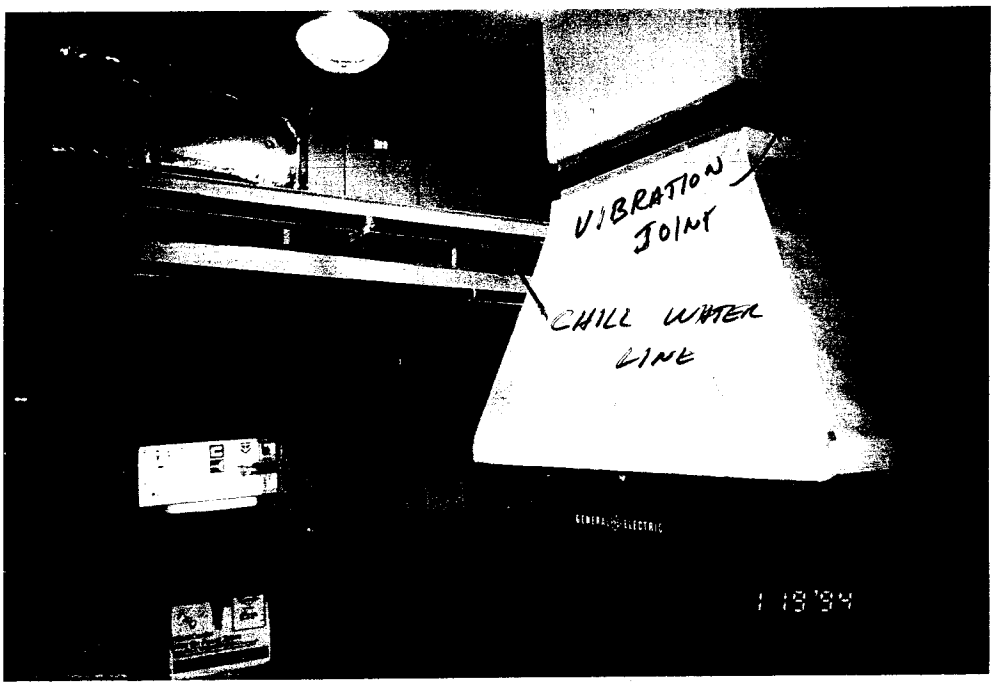
PHOTOGRAPHIC FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ADMIN Activity _____ Location HILO

Functional Space No. NINE/ELEVEN Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. _____ Description: CHILL WATER INSULATION VIBRATION JOINT



INSPECTION AND ASSESSMENT
SUMMARY RESULTS

Building No. ASSEMBLY HALL
Activity KUNIEDA U.S. ARMY RESERVE CENTER
Location HILO, HAWAII

Inspector R. FORD

Date 22-Apr-94

ACBM LOCATION		ACBM CHARACTERISTICS					ASSESSMENT RESULTS			
Homogeneous Area No.	Functional Space No.	Type	Friable		Asbestos Content	Amount of Material (Area)	Condition	Disturbance Potential	AHERA Category (1-7)	Reason for Damage
			Yes	No	% or Assumed					
	TWO	12"X12" FLOOR TILE		X	10% CHRYSOTILE	168 SQ.FT.	GOOD	LOW		INSPECTION

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. TWO Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: FLOOR TILE

Approximate Amount of Material (linear of square ft.): 168 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
1	3 (SUPPLY OFFICE)	FTAH1	12"X12" FLOOR TILE	CHRYSOTILE	10
1	3 "	FTAH2	12"X12" FLOOR TILE	"	"

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. ONE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: ACOUSTIC TILE

Approximate Amount of Material (linear of square ft.): 285 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

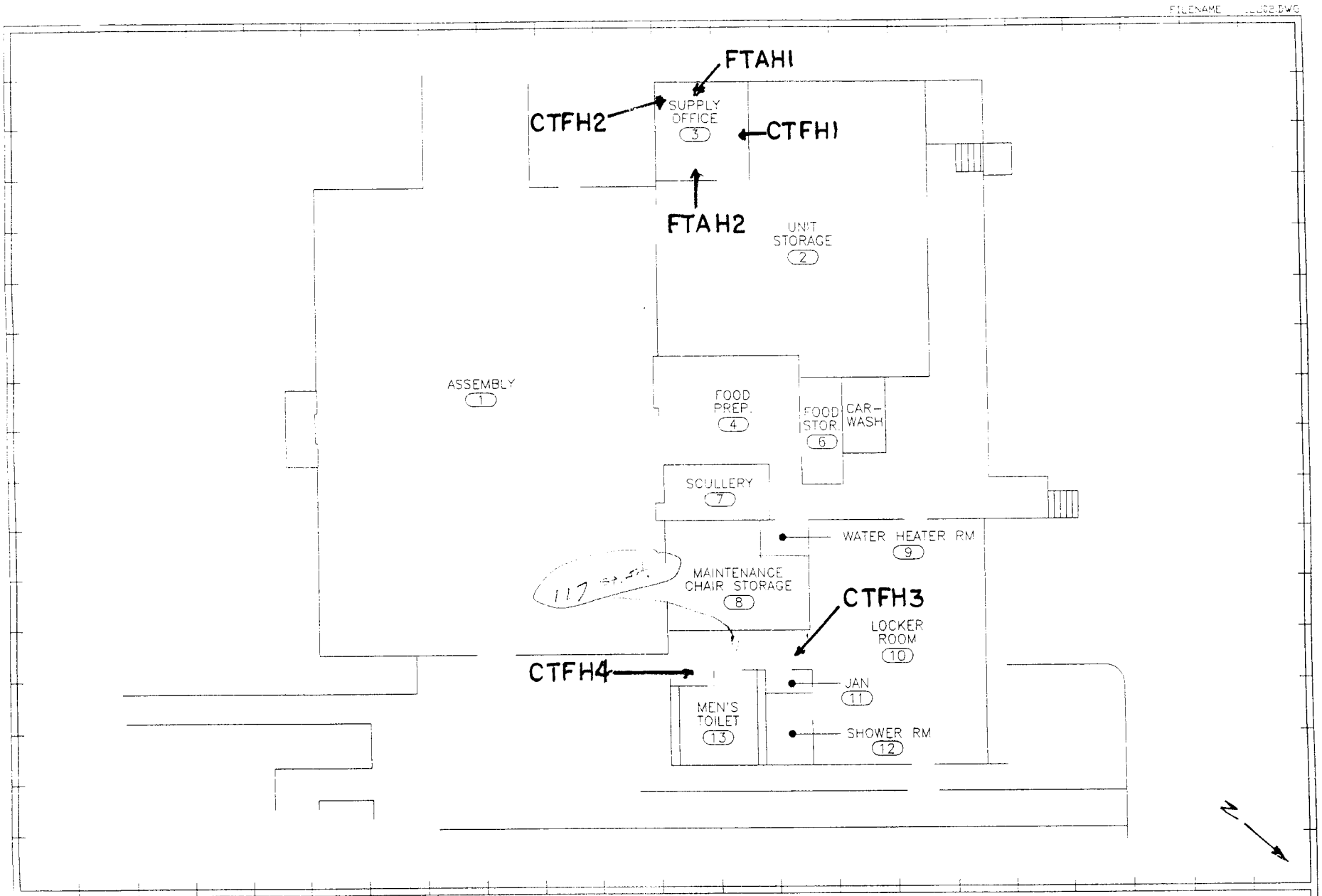
Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
1	3	CTFH1	2'X4' ACOUSTIC CEILING TILE	NAD	
1	3	CTFH2	2'X4' ACOUSTIC CEILING TILE	NAD	
1	HALWAY	CTFH3	2'X4' ACOUSTIC CEILING TILE	NAD	
1	HALLWAY	CTFH4	2'X4' ACOUSTIC CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO. 1 & 2

HOMOGENOUS AREA NO.

INSPECTOR R. FORD, E. FUJIMOTO

DATE 1/19/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. ONE **Description:** JOINT COMPOUND

Approximate Amount of Material (linear of square ft.): 370 LN.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

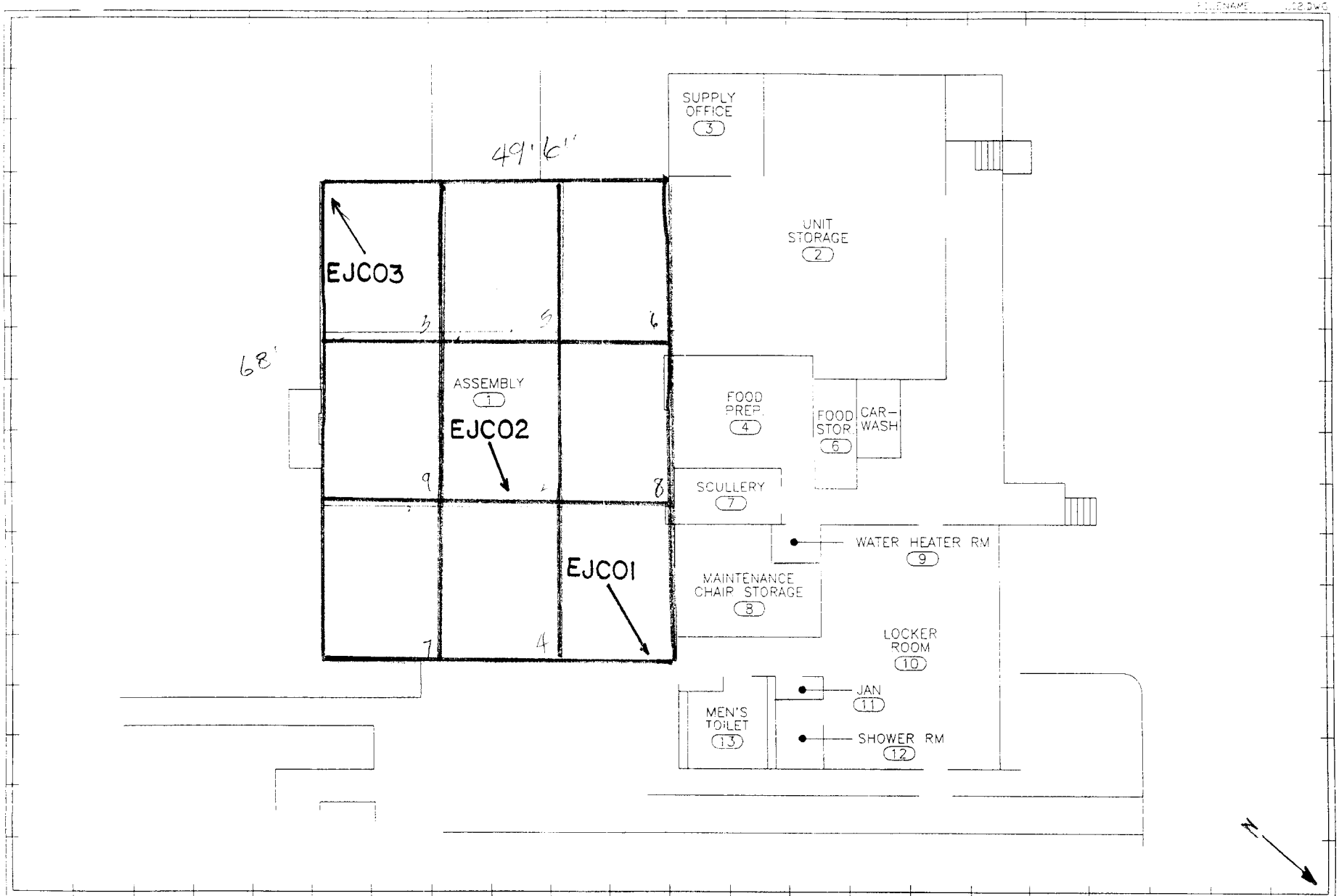
Description: _____

Overall Rating: [ ] Potential for Significant Damage [X] Potential for Damage [ ] Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	ASSEMBLY HALL	EJC01	EXPANSION JOINT COMPOUND	NAD	
ONE	ASSEMBLY HALL	EJC02	EXPANSION JOINT COMPOUND	NAD	
ONE	ASSEMBLY HALL	EJC03	EXPANSION JOINT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto **Date** 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES EXPANSION JOINT COMPOUND

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 1

INSPECTOR R. FORD E. FUJIMOTO

DATE

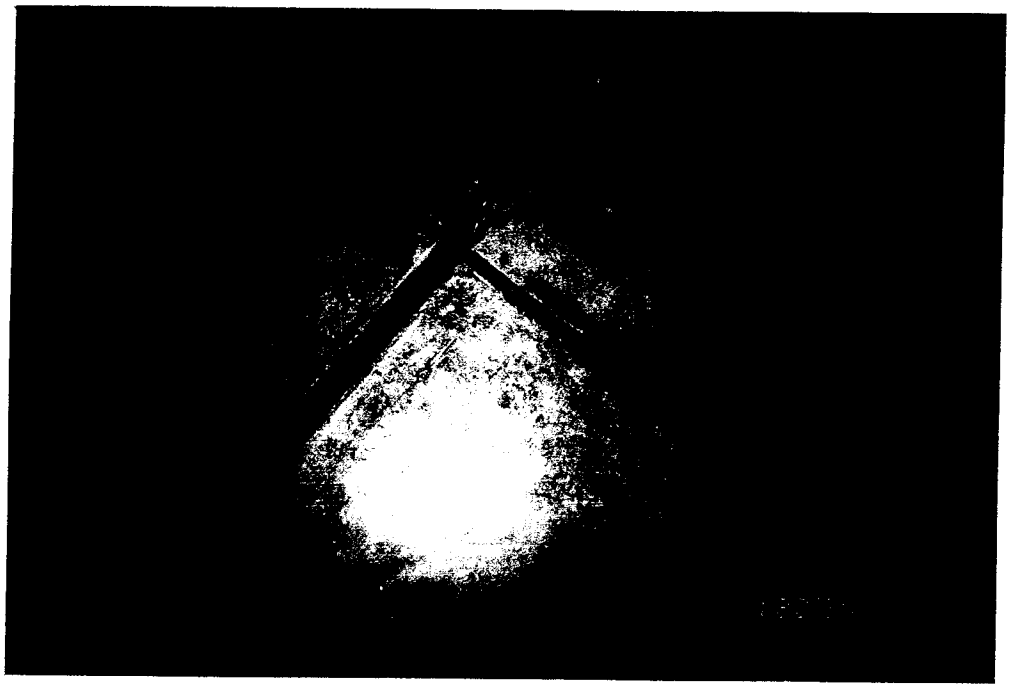
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. HALL Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: _____



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. TWO Description: ACOUSTIC TILE

Approximate Amount of Material (linear of square ft.): 917 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

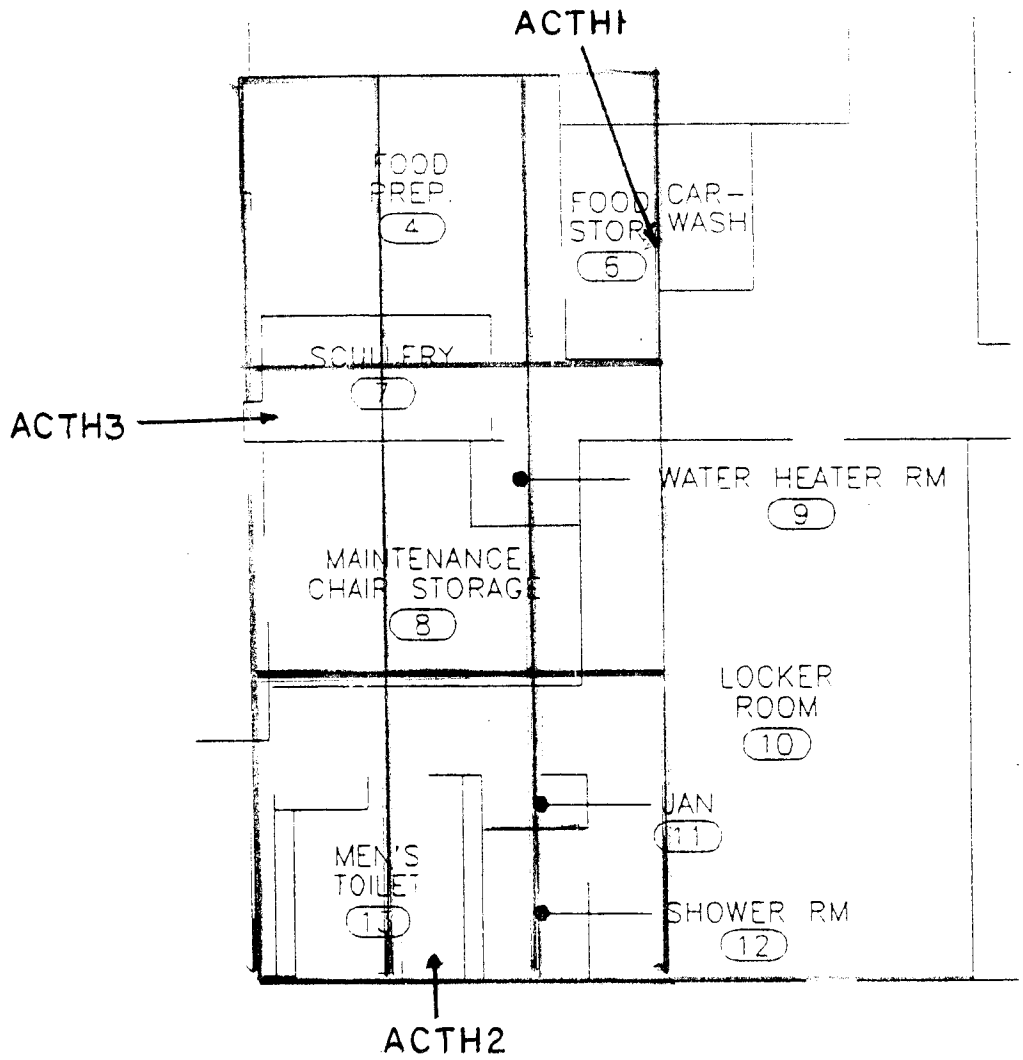
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	6	ACTH1	2'X4' ACOUSTIC CEILING TILE	NAD	
ONE	13	ACTH2	2'X4' ACOUSTIC CEILING TILE	NAD	
ONE	7	ACTH3	2'X4' ACOUSTIC CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES CEILING TILE 2'X4'

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 2

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. **Type** **Location**

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. THREE **Description:** FIBERGLASS INSULATION

Approximate Amount of Material (linear or square ft.): 8,300 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description:

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

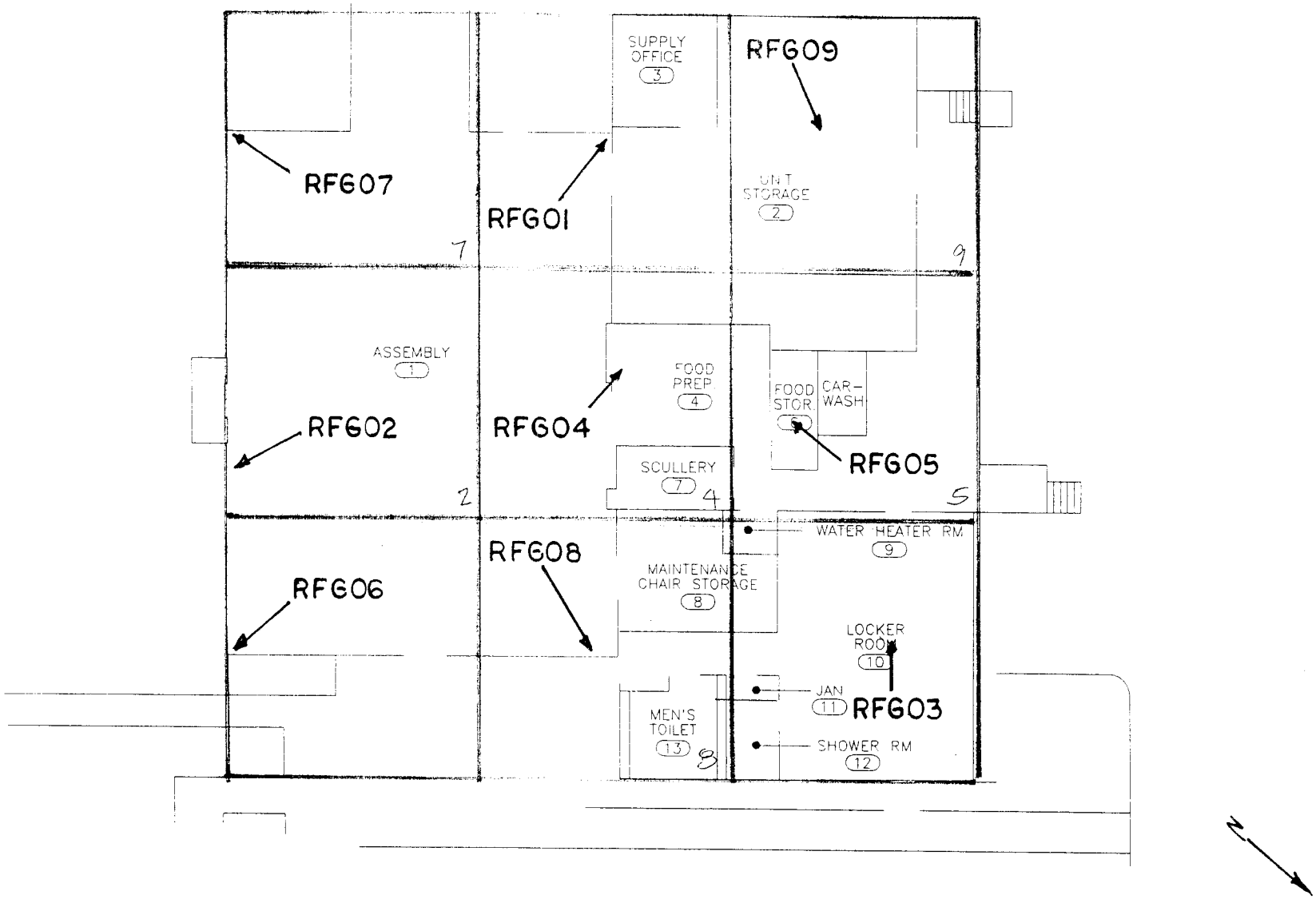
Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	ASSEMBLY HALL	RFG01	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG02	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG03	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG04	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG05	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG06	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG07	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG08	FIBERGLASS INSULATION		
ONE	ASSEMBLY HALL	RFG09	FIBERGLASS INSULATION		

Inspector R. Ford / E. Fujimoto **Date** 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES CEILING FIBERGLASS INSULATION

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 3

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/20/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. HALL Activity _____ Location HILO

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. THREE Description: FIBERGLASS INSULATION

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. THREE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: GYPSUM BOARD

Approximate Amount of Material (linear of square ft.): 210 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
1	1	GYB01	GYPSUM WALL BOARD	NAD	
1	1	GYB02	GYPSUM WALL BOARD	NAD	
1	1	GYB03	GYPSUM WALL BOARD	NAD	

Inspector R. Ford / E. Fujimoto Date 20-Jan-94

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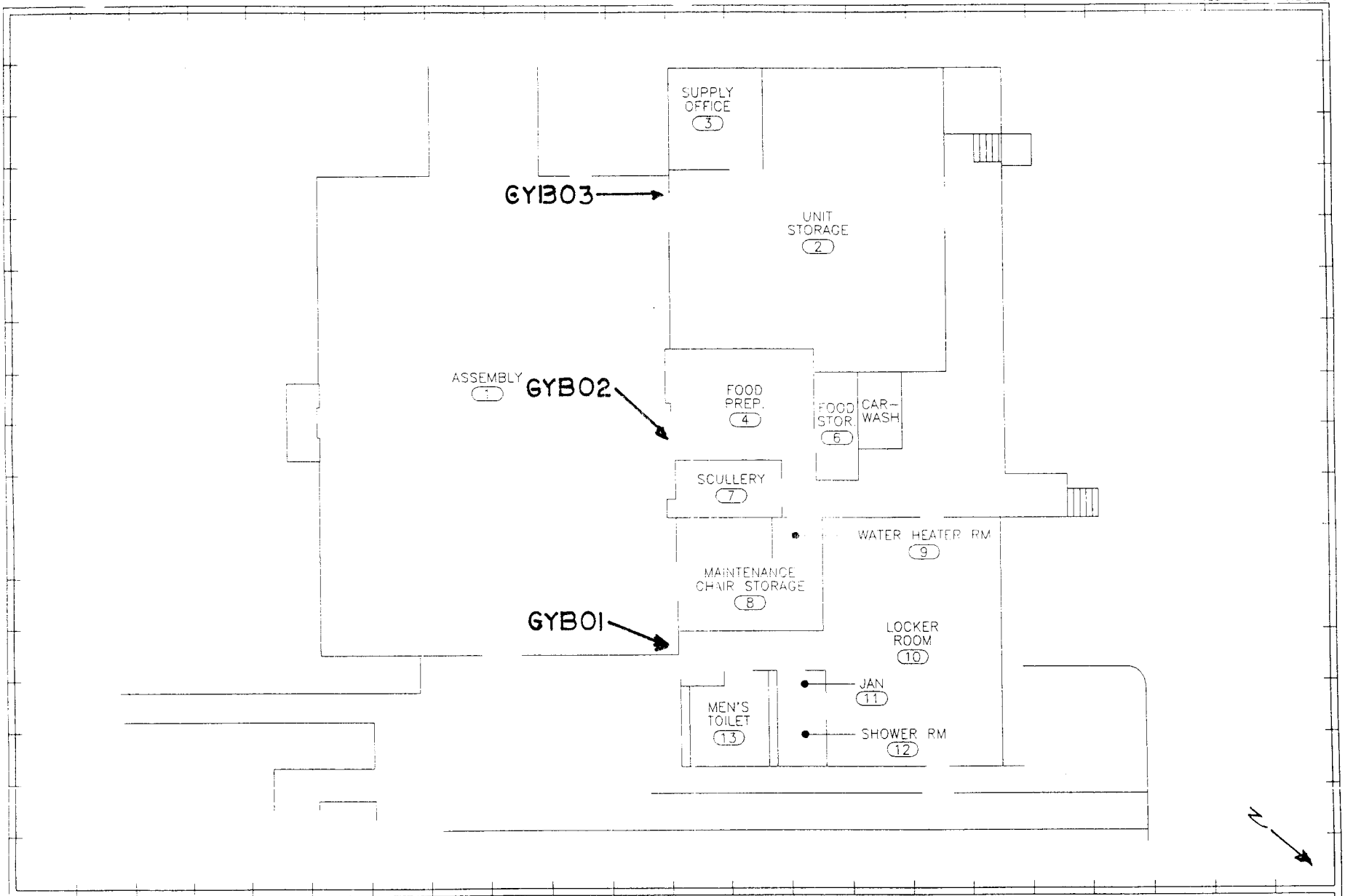


FLOOR PLAN FOR ACBM SAMPLES GYPSUM WALL BOARD ABOVE DOOR WAY.

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO. ✓ 3

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/20/94

210 sq.

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. FOUR **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ **Description:** CERAMIC TILE

Approximate Amount of Material (linear of square ft.): 695 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

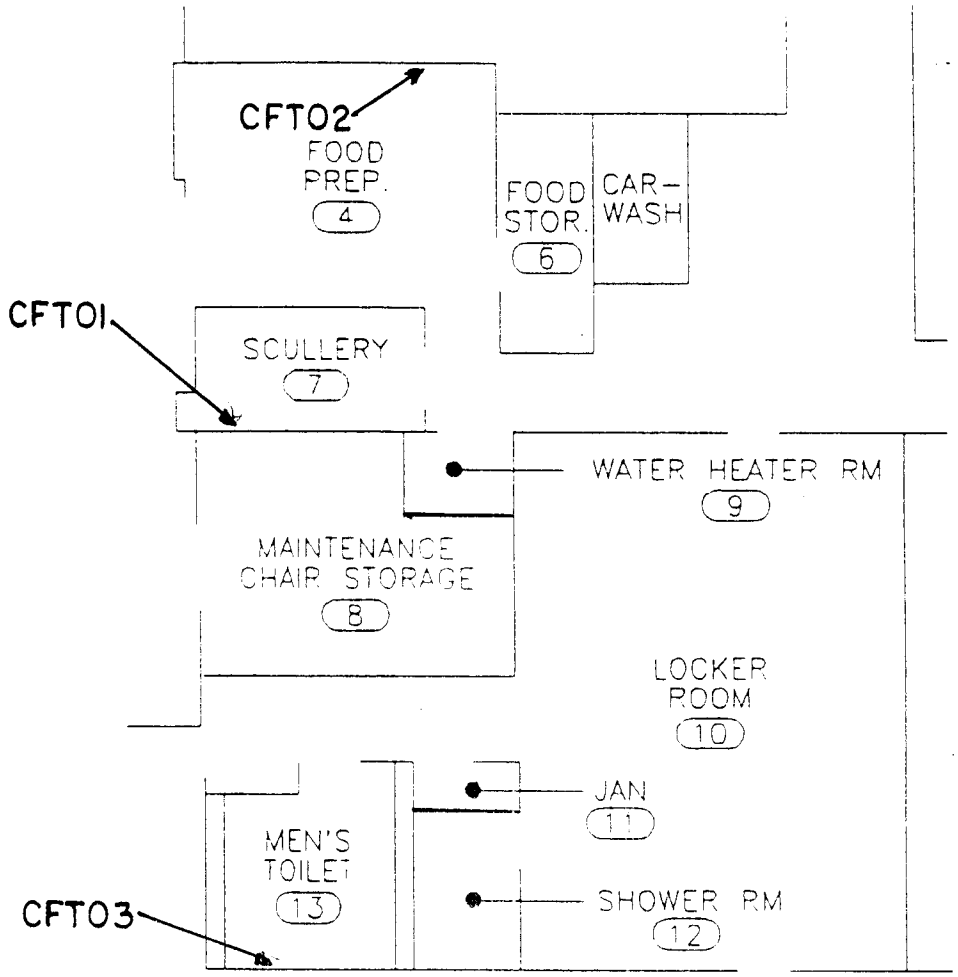
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
1	7	CFT01	12"X12" (1" MOSAIC CERAMIC TILE)	NAD	
1	4	CFT02	12"X12" (1" MOSA1C CERAMIC TILE)	NAD	
1	13	CFT03	12"X12" (1" MOSAIC CERAMIC TILE)	NAD	

Inspector R. Ford / E. Fujimoto **Date** 20-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO. 4

HOMOGENOUS AREA NO.

INSPECTOR R. FORD, E. FUJIMOTO

DATE 1/20/94

FIELD FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. HALL Activity _____ Location HILO

Functional Space No. FOUR Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: CERAMIC TILE

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. FIVE **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ **Description:** GYPSUM BOARD

Approximate Amount of Material (linear of square ft.): 51 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

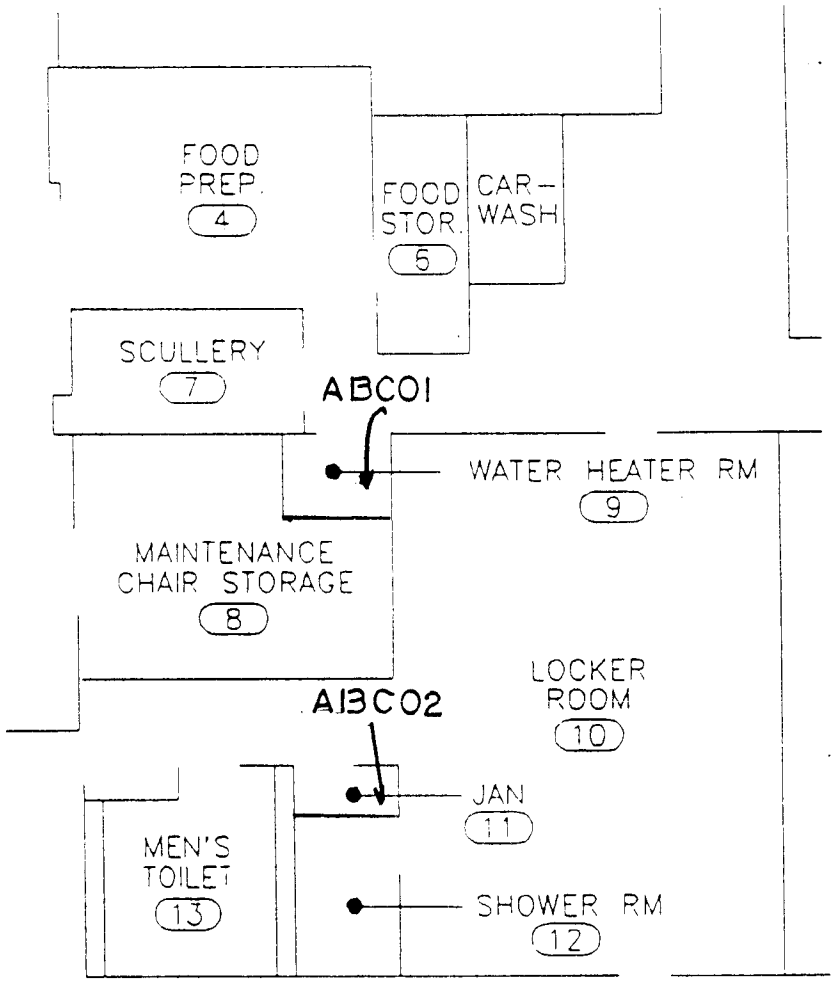
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	9	ABC01	GYPSUM BOARD CEILING	NAD	
ONE	12	ABC02	GYPSUM BOARD CEILING	NAD	

Inspector R. Ford / E. Fujimoto **Date** 20-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO. 5

HOMOGENOUS AREA NO.

INSPECTOR R. FORD / E. FUJIMOTO

DATE 1/20/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. SIX **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. _____ **Description:** STORAGE TANK INSULATION

Approximate Amount of Material (linear of square ft.): 32 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
1	8	STG01	STORAGE TANK INSULATION	NAD	

Inspector R. Ford / E. Fujimoto **Date** 20-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. SEVEN **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. _____ **Description:** STORAGE TANK INSULATION

Approximate Amount of Material (linear of square ft.): 32 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
1	ABOVE CEILING	HWI01	HOT WATER PIPING INSULATION	NAD	

Inspector R. Ford / E. Fujimoto **Date** 20-Jan-94

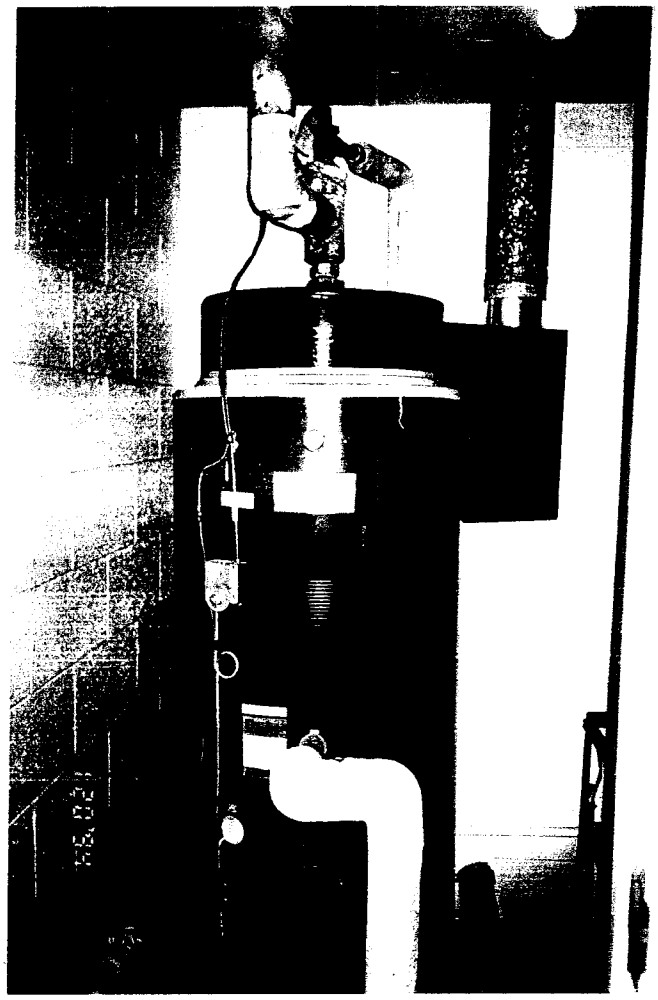
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. HALL Activity _____ Location HILO

Functional Space No. SIX - SEVEN Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☒ TSI ☐ Other

Homogeneous Area No. _____ Description: STORAGE TANK INSULATION



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. EIGHT **Type** _____ **Location** _____

ype of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ **Description:** EXHAUST JOINT

Approximate Amount of Material (linear of square ft.): 24 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

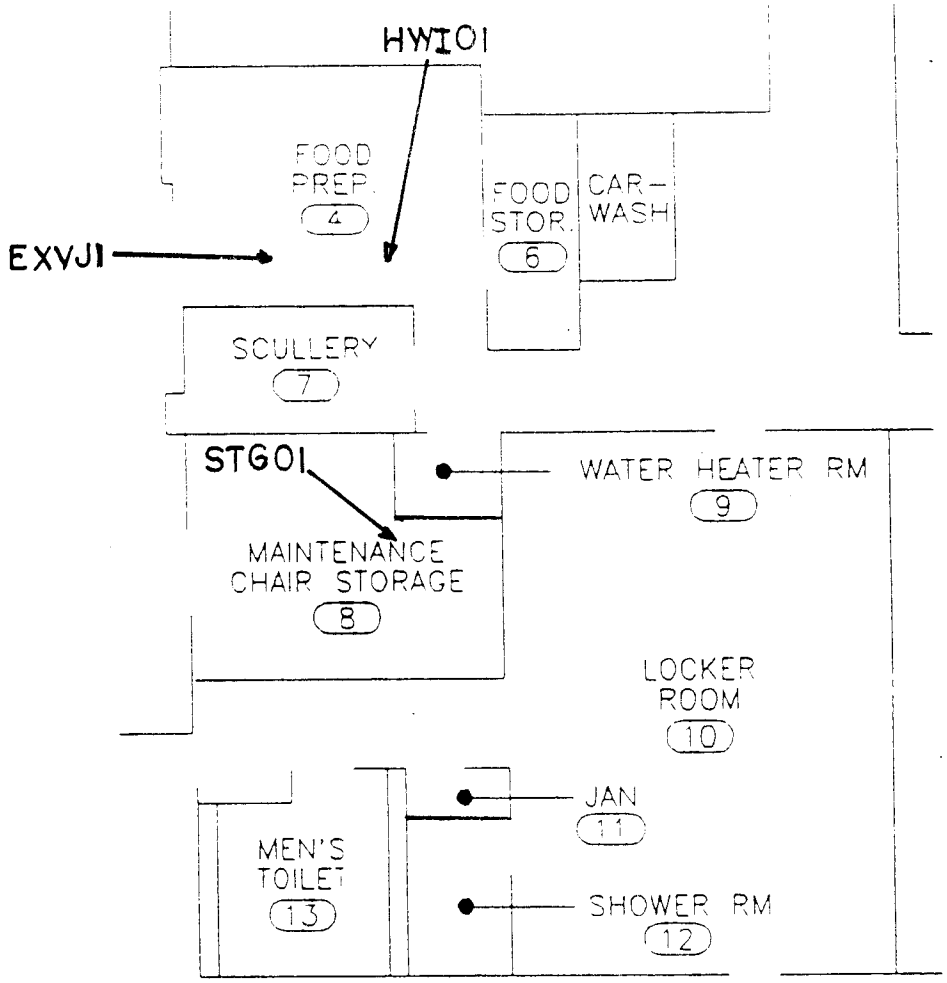
Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
1	ABOVE CEILING	EXVJ1	EXHAUST VIBRATION JOINT	NAD	

Inspector R. Ford / E. Fujimoto **Date** 20-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO. 6-7-8

HOMOGENOUS AREA NO.

INSPECTOR R. FORD / E. FUJIMOTO

DATE 1/20/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. NINE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: EXHAUST JOINT

Approximate Amount of Material (linear of square ft.): THRUOUT

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		REH01	EXHAUST VENT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. TEN Type _____ Location _____

ype of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: VENT MASTIC

Approximate Amount of Material (linear of square ft.): 2 LN.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ROOF		RVH01	DWV MASTIC	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. ELEVEN **Type** _____ **Location** _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ **Description:** LAP JOINT FOAM

Approximate Amount of Material (linear of square ft.): THRUOUT

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		RJH01	LAP JOINT FOAM	NAD	

Inspector R. Ford / E. Fujimoto **Date** 21-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. ASSEMBLY HALL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. TWLEVE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: MASTIC

Approximate Amount of Material (linear of square ft.): THRUOUT

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

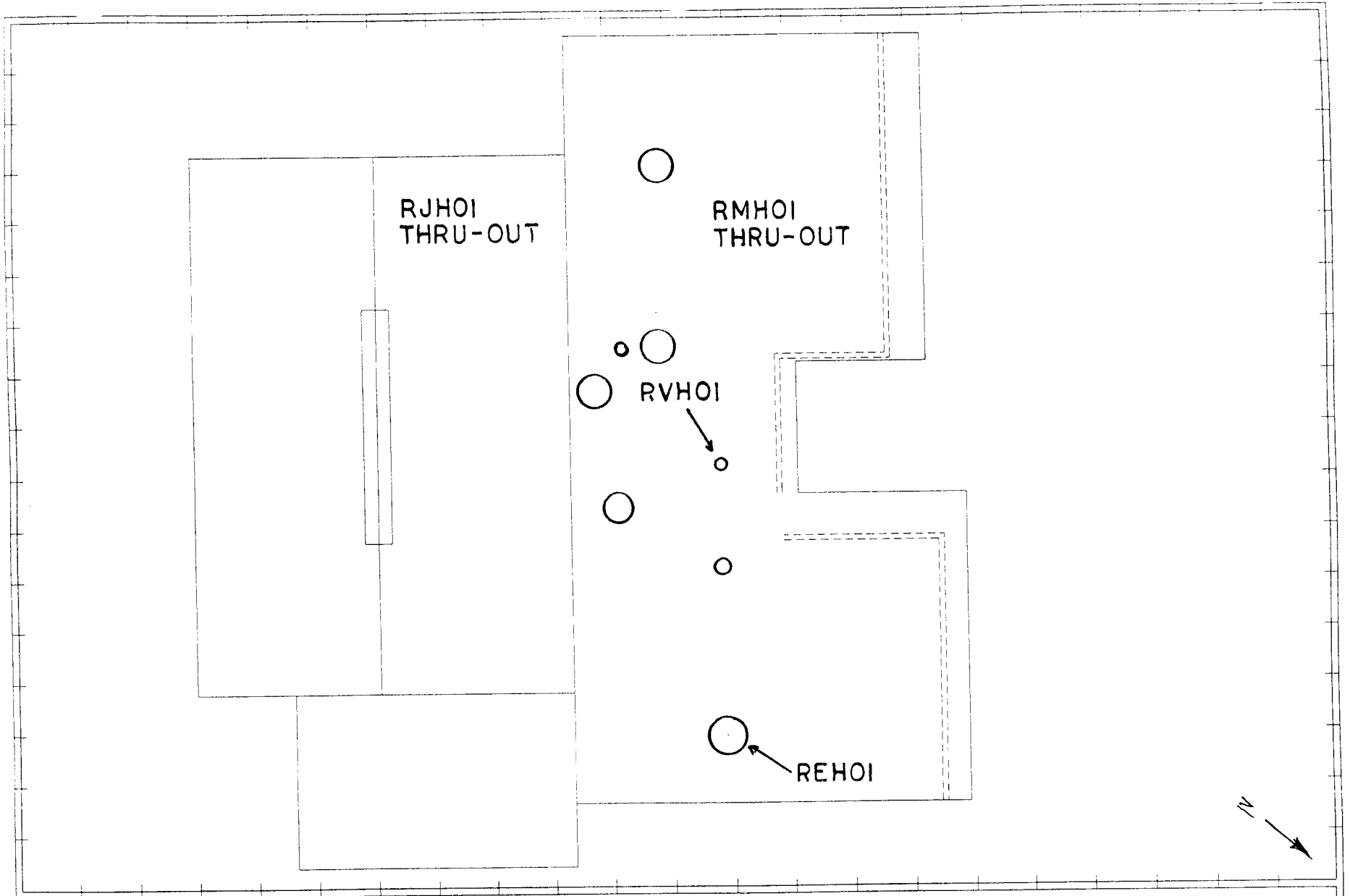
Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		RMH01	LAP JOINT MASTIC	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION ASSEMBLY HALL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. ONE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: VINYL FLOOR TILE

Approximate Amount of Material (linear or square ft.): 272 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: _____

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

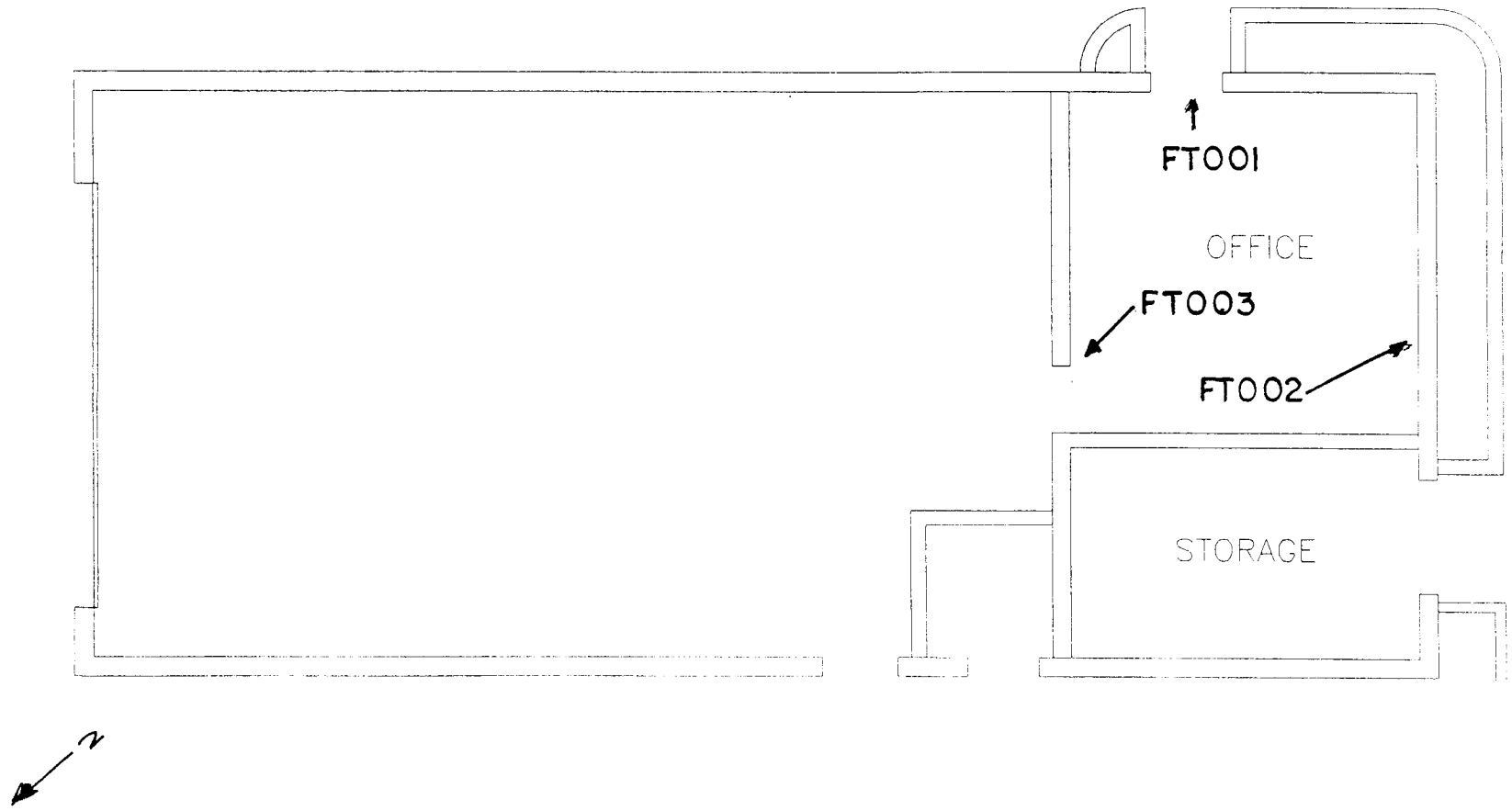
Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ONE	OFFICE	FT001	12"X12" FLOOR TILE	CHRYSOTILE	10
ONE	OFFICE	FT002	12"X12" FLOOR TILE	"	"
ONE	OFFICE	FT003	12"X12" FLOOR TILE	"	"

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

FILENAME: HILO05.DWG



FLOOR PLAN FOR ACBM SAMPLES WHITE FLOOR TILE

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO. 1

HOMOGENOUS AREA NO.

INSPECTOR FORD FUJIMOTO

DATE

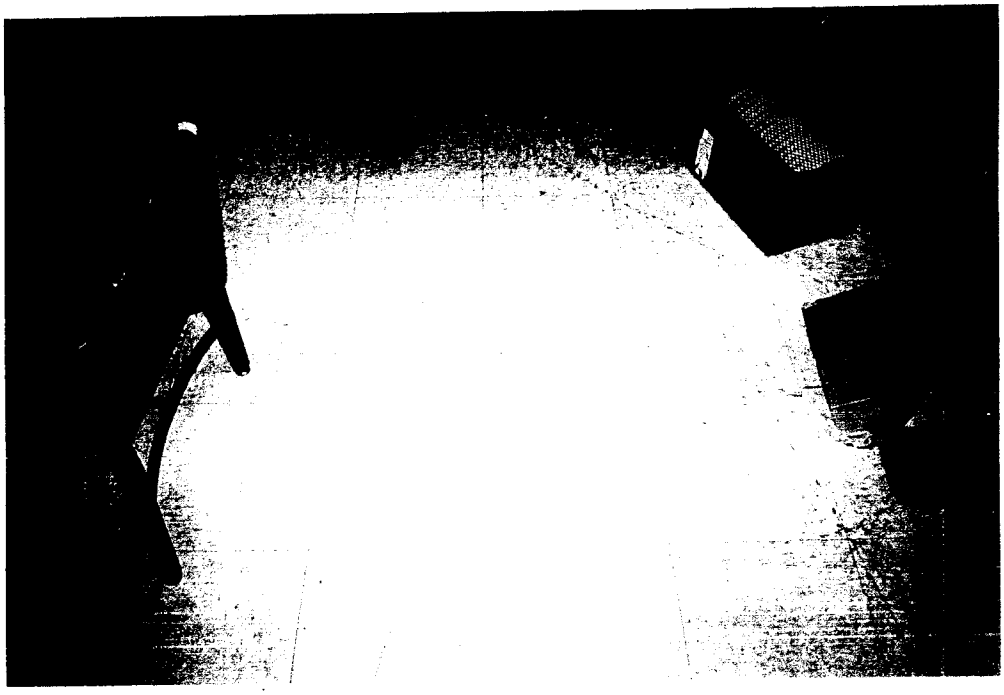
RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity _____ Location HILO

Functional Space No. ONE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. _____ Description: VINYL FLOOR TILE



RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. TWO Type Location

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. Description: VINYL BASE COVE

Approximate Amount of Material (linear of square ft.): 66 LN.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description:

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description:

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

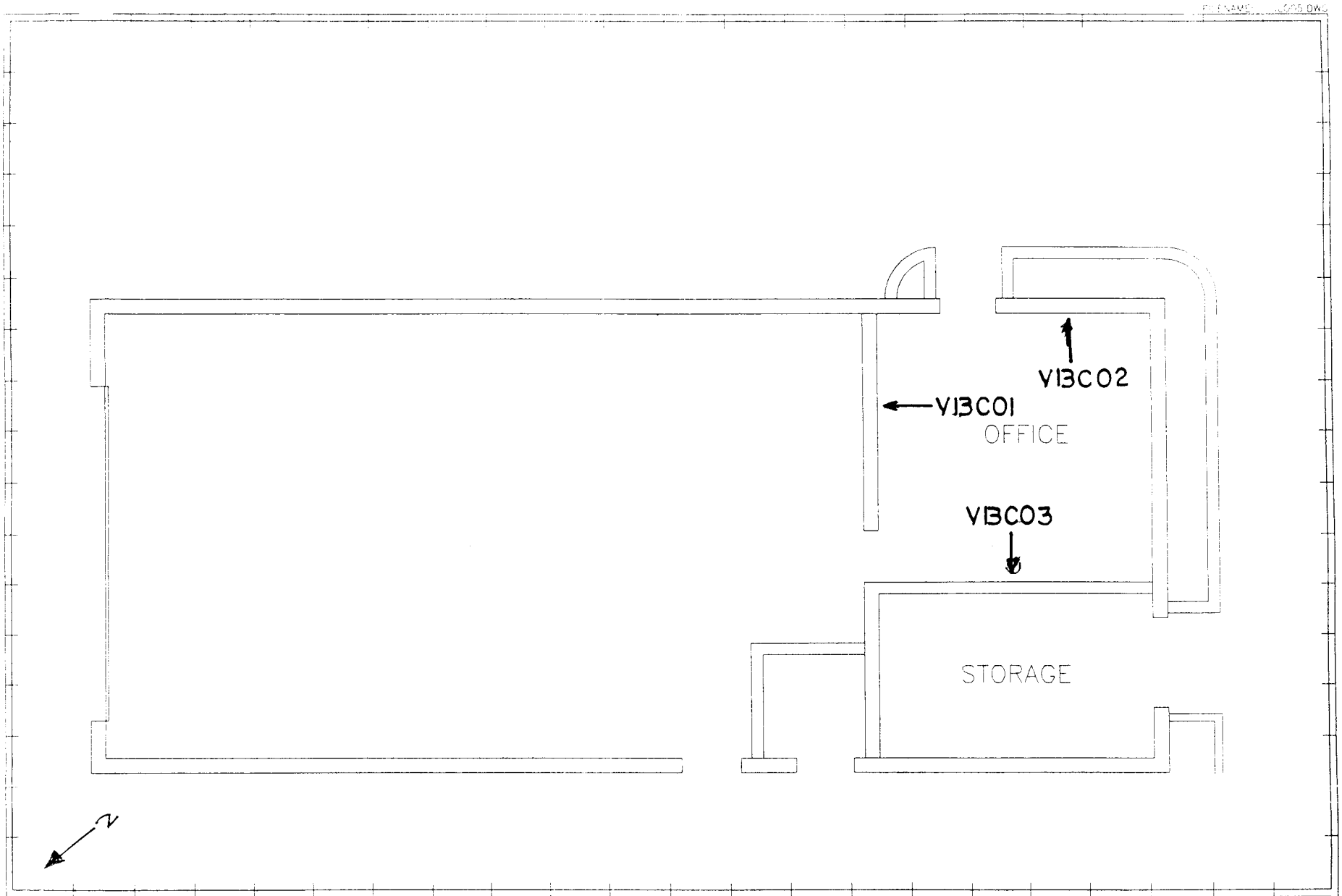
Description:

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	OFFICE	VBC01	VINYL BASE COVE	NAD	
ONE	OFFICE	VBC02	VINYL BASE COVE	NAD	
ONE	OFFICE	VBC03	VINYL BASE COVE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO. 2

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/19/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. FOUR Type Location

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. Description: ROOF JOINT COMPOUND

Approximate Amount of Material (linear of square ft.): 154 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

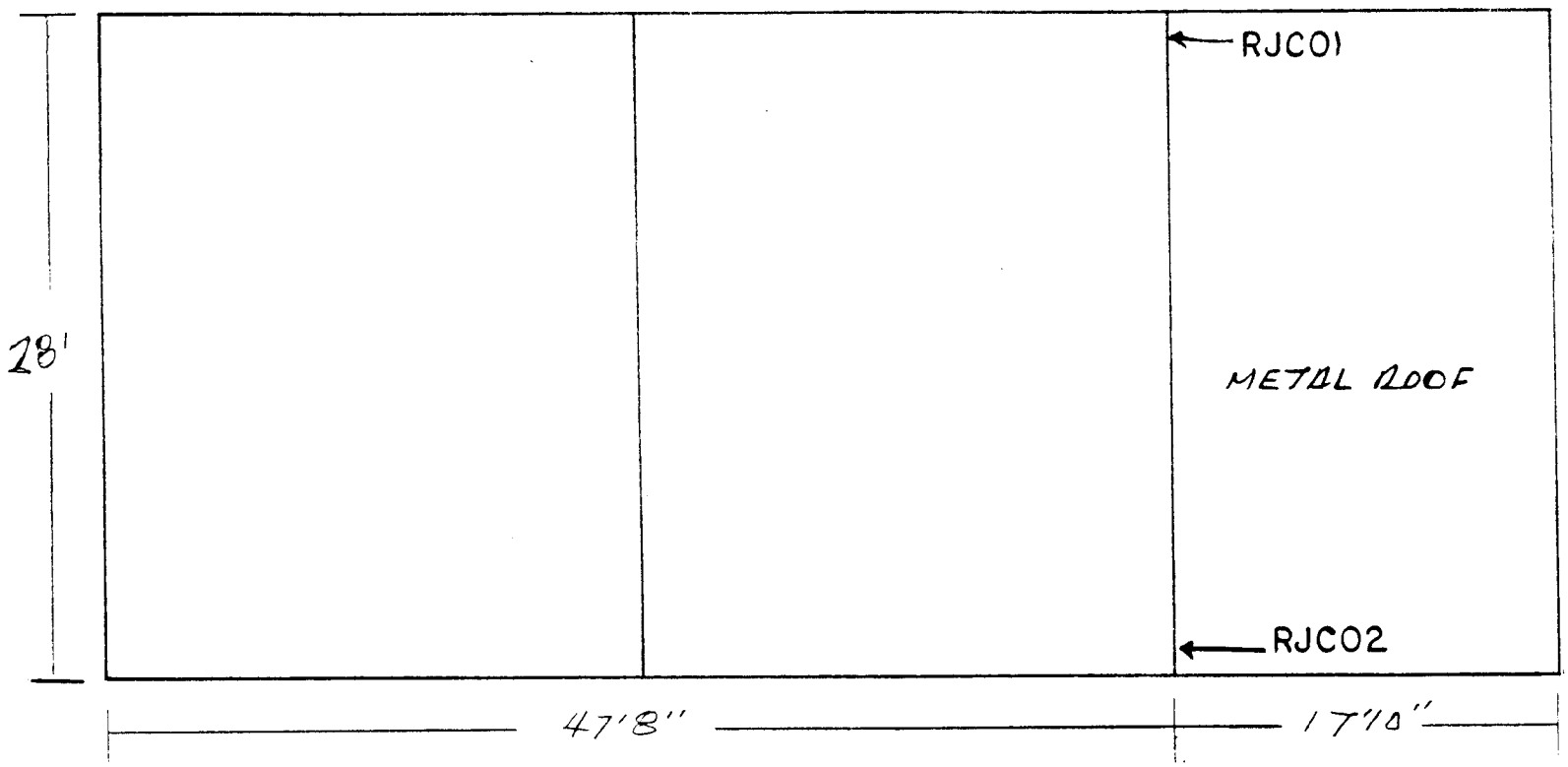
Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		RJC01	ROOF JOINT COMPOUND	NAD	
ROOF		RJC02	ROOF JOINT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto Date 20-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO. 4

HOMOGENOUS AREA NO.

INSPECTOR R. FORD / E. FUJIHOTO

DATE 1/28/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. THREE Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. _____ Description: ACOUSTIC TILE

Approximate Amount of Material (linear of square ft.): 272 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

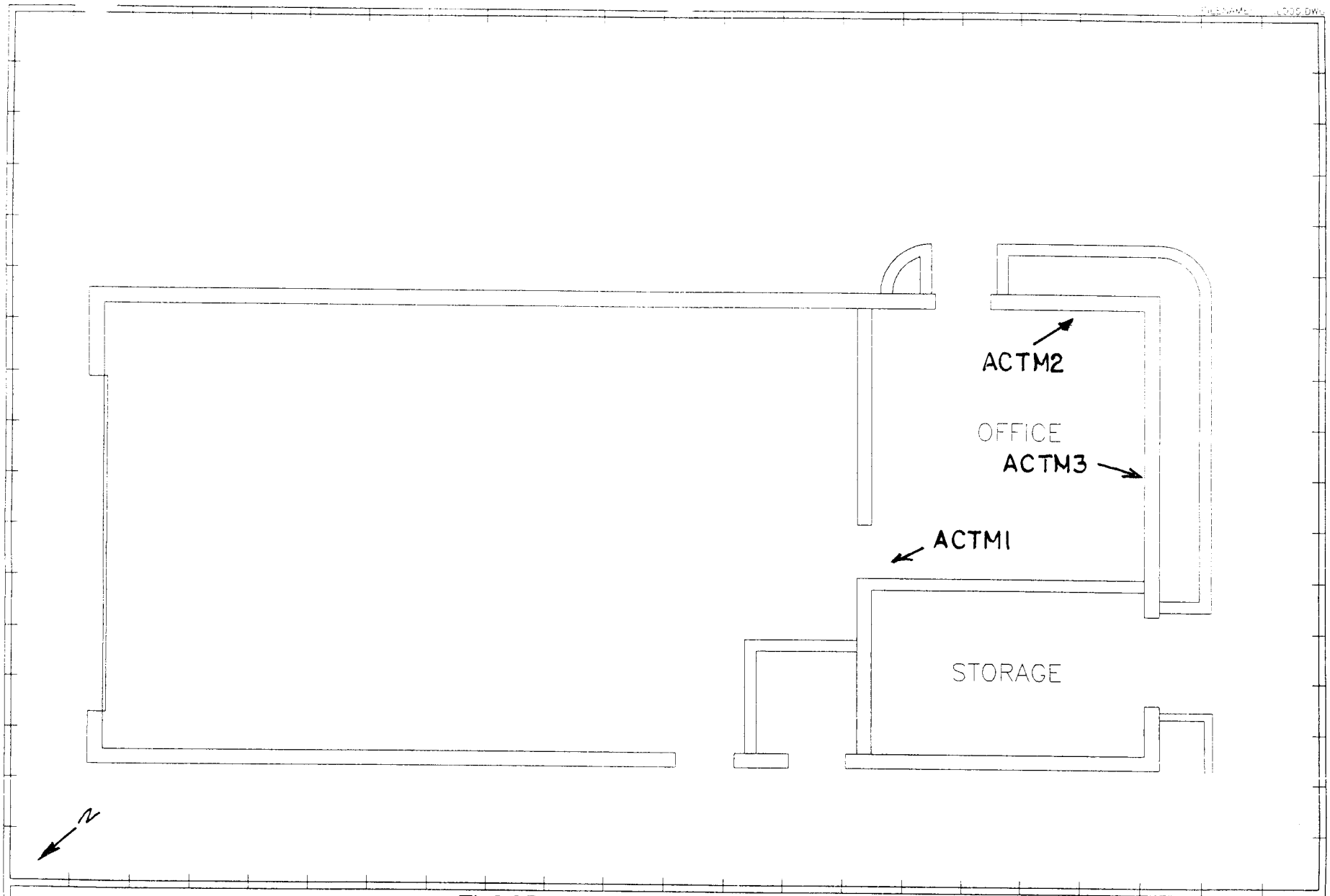
Description: _____

Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	OFFICE	ACTM1	2'X4' ACOUSTIC CEILING TILE	NAD	
ONE	OFFICE	ACTM2	2'X4' ACOUSTIC CEILING TILE	NAD	
ONE	OFFICE	ACTM3	2'X4' ACOUSTIC CEILING TILE	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACOUSTIC CEILING TILE 2' X 4'

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO. 3

HOMOGENOUS AREA NO.

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

INSPECTION AND ASSESSMENT
SUMMARY RESULTS

Building No. MOTOR POOL
Activity KUNIEDA U.S. ARMY RESERVE CENTER
Location HILO, HAWAII

Inspector R. FORD

Date 22-Apr-94

ACBM LOCATION		ACBM CHARACTERISTICS					ASSESSMENT RESULTS			
Homogeneous Area No.	Functional Space No.	Type	Friable		Asbestos Content	Amount of Material (Area)	Condition	Disturbance Potential	AHERA Category (1-7)	Reason for Damage
			Yes	No	% or Assumed					
ONE		EXPANSION JOINT COMPOUND		X	15% CHRYSOTILE	240 LN.FT.	GOOD	LOW		INSPECTION
	ONE	12"X12" FLOOR TILE		X	10% CHRYSOTILE	272 SQ.FT.	GOOD	LOW		INSPECTION

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. ONE **Description:** EXPANSION JOINT COMPOUND

Approximate Amount of Material (linear of square ft.): 240 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

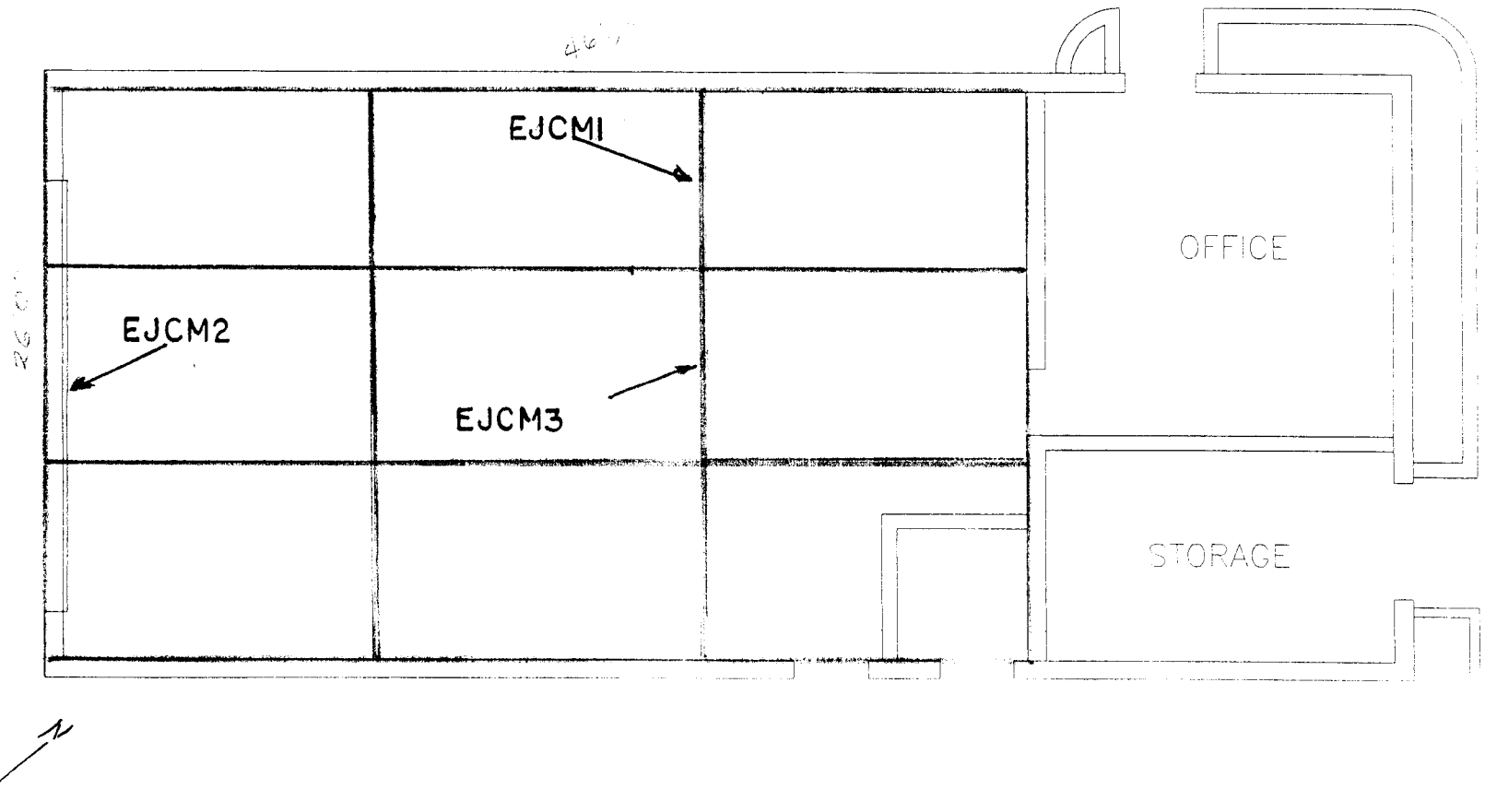
Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	GARAGE	EJCM1	EXPANSION JOINT COMPOUND	NAD	
ONE	GARAGE	EJCM2	EXPANSION JOINT COMPOUND	CHRYSOTILE	15
ONE	GARAGE	EJCM3	EXPANSION JOINT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto **Date** 19-Jan-94

FILENAME: 1005.DWG



FLOOR PLAN FOR ACBM SAMPLES

EXPANSION JOINT COMPOUND

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 1

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. _____ Type _____ Location _____

Type of Suspect Material: [ ] Surfacing [ ] TSI [X] Other

Homogeneous Area No. TWO Description: ROOF FIBERGLASS INSULATION

Approximate Amount of Material (linear of square ft.): 512 SQ.FT.

Condition

Percent Damage: 0 % [ ] Localized [ ] Distributed

Type of Damage: [ ] Deterioration [ ] Water [ ] Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: [X] Good [ ] Fair [ ] Poor

Potential for Disturbance

Frequency of Potential Contact: [ ] High [ ] Moderate [X] Low

Description: _____

Influence of Vibration: [ ] High [ ] Moderate [X] Low

Description: _____

Potential for Air Erosion: [ ] High [ ] Moderate [X] Low

Description: _____

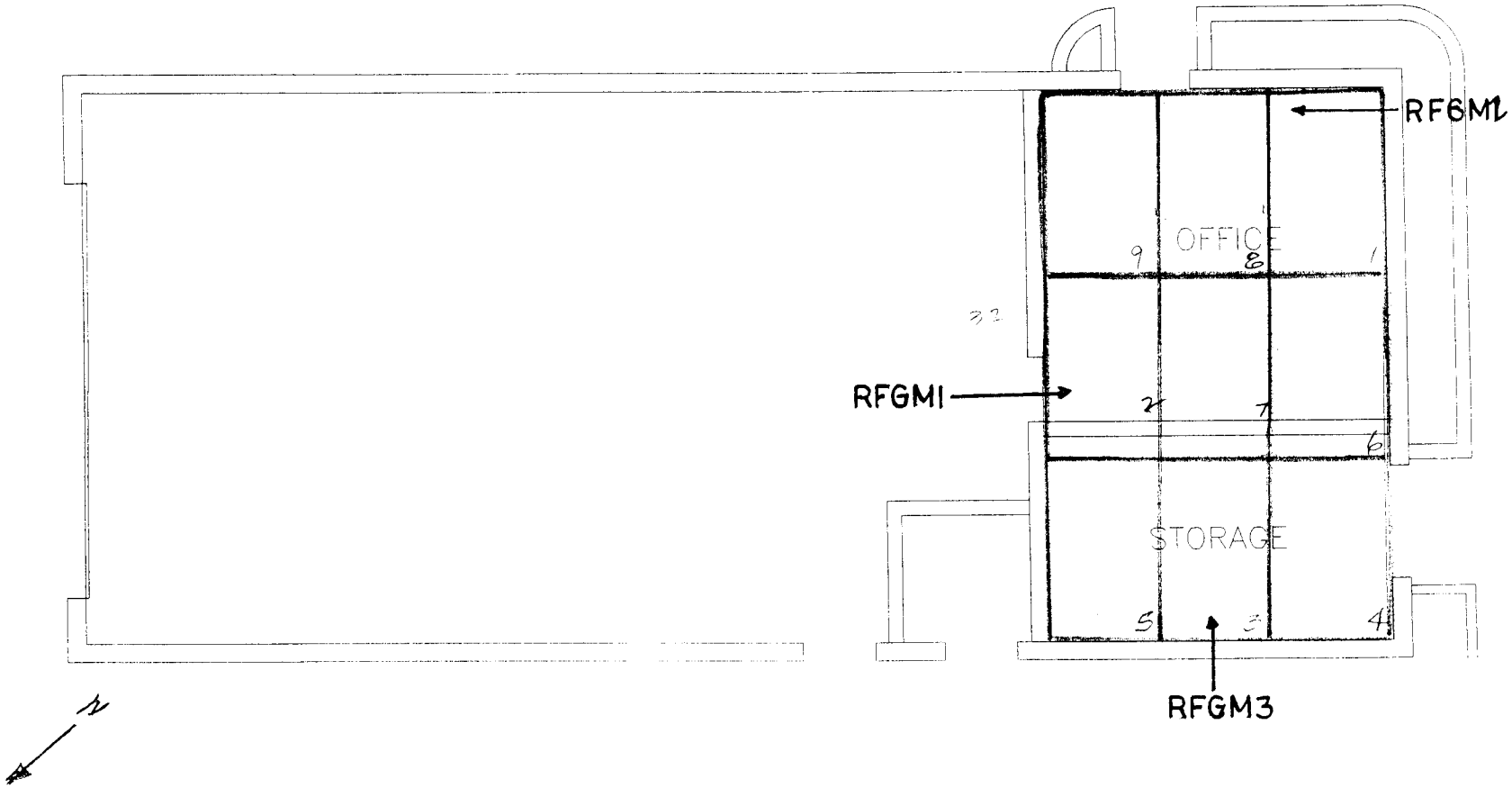
Overall Rating: [ ] Potential for Significant Damage [ ] Potential for Damage [X] Low Potential

Comments: _____

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ONE	OFFICE/STORAGE	RFGM1	FIBERGLASS INSULATION	NAD	
ONE	OFFICE/STORAGE	RFGM2	FIBERGLASS INSULATION	NAD	
ONE	OFFICE/STORAGE	RFGM3	FIBERGLASS INSULATION	NAD	

Inspector R. Ford / E. Fujimoto Date 19-Jan-94

FILENAME: 005.DWG



FLOOR PLAN FOR ACBM SAMPLES ROOF FIBERGLASS INSULATION

ACTIVITY USAR CTR. HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO.

HOMOGENOUS AREA NO. 2

INSPECTOR R. FORD E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL **Activity** KUNIEDA USAR CENTER **Location** HILO, HAWAII

Functional Space No. _____ **Type** _____ **Location** _____

Type of Suspect Material: ☐ **Surfacing** ☐ **TSI** ☒ **Other**

Homogeneous Area No. THREE **Description:** FELT PAPER AND MASTIC

Approximate Amount of Material (linear of square ft.): 1,344 SQ.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description: _____

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description: _____

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

Description: _____

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments: _____

Sample Location		Sample	Type of	Asbestos	
Floor	Room	No.	Material	Type	%
ROOF		RFM01	FELT PAPER AND MASTIC	NAD	
ROOF		RFM02	FELT PAPER AND MASTIC	NAD	
ROOF		RFM03	FELT PAPER AND MASTIC	NAD	

Inspector R. Ford / E. Fujimoto **Date** 21-Jan-94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity KUNIEDA USAR CENTER Location HILO, HAWAII

Functional Space No. FIVE Type Location

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. Description: EXHAUST VENT

Approximate Amount of Material (linear of square ft.): 24 LN.FT.

Condition

Percent Damage: 0 % ☐ Localized ☐ Distributed

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Description: NONE - SAMPLING FOR OPERATING AND MAINTENANCE

Overall Rating: ☒ Good ☐ Fair ☐ Poor

Potential for Disturbance

Frequency of Potential Contact: ☐ High ☐ Moderate ☒ Low

Description:

Influence of Vibration: ☐ High ☐ Moderate ☒ Low

Description:

Potential for Air Erosion: ☐ High ☐ Moderate ☒ Low

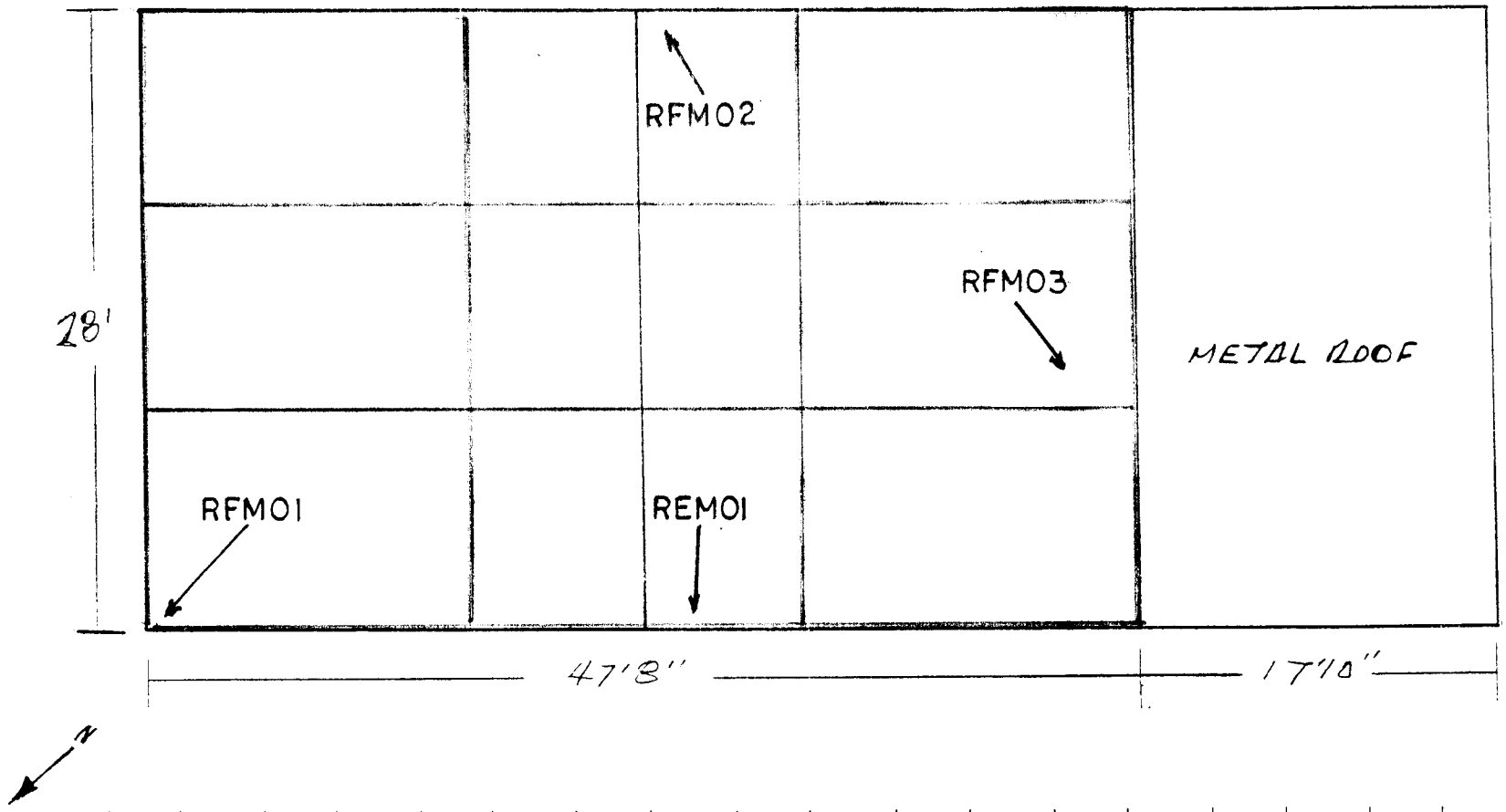
Description:

Overall Rating: ☐ Potential for Significant Damage ☐ Potential for Damage ☒ Low Potential

Comments:

Sample Location		Sample No.	Type of Material	Asbestos	
Floor	Room			Type	%
ROOF		REM01	EXHAUST VENT COMPOUND	NAD	

Inspector R. Ford / E. Fujimoto Date 21-Jan-94



FLOOR PLAN FOR ACBM SAMPLES

ACTIVITY USAR CTR HILO

FACILITY

FACILITY DESCRIPTION MOTOR POOL

FUNCTIONAL SPACE NO. 5

HOMOGENOUS AREA NO. 3

INSPECTOR R. FORD, E. FUJIMOTO

DATE 1/21/94

RECORDING FORM FOR PHYSICAL ASSESSMENT DATA
AND BULK SAMPLING

Building No. MOTOR POOL Activity _____ Location HILO

Functional Space No. FIVE Type _____ Location _____

Type of Suspect Material: ☐ Surfacing ☐ TSI ☒ Other

Homogeneous Area No. THREE Description: ROOF MASTIC/FELT - EXHAUST VENT

Unitek Environmental Consultants, Inc.

930 Mapunapuna Street
Honolulu, Hawai'i 96819
Telephone: (808) 836-0555
Fax Phone: (808) 836-2773

April 6, 1994

Commanding Officer
Navy Public Works Center
Pearl Harbor, Hawaii 96860-5470

Reference: PWC Code 330
UEC Project 8332; Updated Results

Unitek Environmental Consultants, Inc. (UEC) is pleased to provide the attached analytical report for the bulk samples submitted from the above referenced project to the UEC NVLAP accredited laboratory. This update complies with your memo dated April 4, 1994.

Table 1
Bulk Sample Analysis Results

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00817	FTB01 - Floor Tile	No Asbestos Detected
94-00818	FTB02 - Floor Tile	No Asbestos Detected
94-00819	FTB03 - Floor Tile	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00820	FTB04 - Floor Tile	No Asbestos Detected
94-00821	FTB05 - Floor Tile	No Asbestos Detected
94-00822	FTH02 - Floor Tile	No Asbestos Detected
94-00823	FTH03 - Floor Tile	No Asbestos Detected
94-00824	FTH05 - Floor Tile	No Asbestos Detected
94-00825	BC001 - Vinyl Base Board	No Asbestos Detected
94-00826	BC002 - Vinyl Base Board	No Asbestos Detected
94-00827	BC003 - Vinyl Base Board	No Asbestos Detected
94-00828	BC004 - Vinyl Base Board	No Asbestos Detected
94-00829	BC005 - Vinyl Base Board	No Asbestos Detected
94-00830	BC006 - Vinyl Base Board	No Asbestos Detected
94-00831	BC007 - Vinyl Base Board	No Asbestos Detected
94-00832	CTF01 - Fiberglass Acoustic	No Asbestos Detected
94-00833	CTF02 - Fiberglass Acoustic	No Asbestos Detected
94-00834	CTF03 - Fiberglass Acoustic	No Asbestos Detected
94-00835	GBC01 - Gypsum Board	No Asbestos Detected
94-00836	GBC02 - Gypsum Board	No Asbestos Detected
94-00837	GBC03 - Gypsum Board	No Asbestos Detected
94-00838	CTA01 - Acoustic Tile	No Asbestos Detected
94-00839	CTA02 - Acoustic Tile	No Asbestos Detected
94-00840	CTA03 - Acoustic Tile	No Asbestos Detected
94-00841	CTA04 - Acoustic Tile	No Asbestos Detected
94-00842	CTA05 - Acoustic Tile	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00843	CTA06 - Acoustic Tile	No Asbestos Detected
94-00844	CTA07 - Acoustic Tile	No Asbestos Detected
94-00845	AHU01 - Fiberglass	No Asbestos Detected
94-00846	AHU02 - Fiberglass	No Asbestos Detected
94-00847	AHU03 - Fiberglass	No Asbestos Detected
94-00848	AHU04 - Fiberglass	No Asbestos Detected
94-00849	RFA01 - Felt/Mastic	No Asbestos Detected
94-00850	RFA02 - Felt/Mastic	No Asbestos Detected
94-00851	RFA03 - Felt/Mastic	No Asbestos Detected
94-00852	RFA04 - Felt/Mastic	No Asbestos Detected
94-00853	RFA05 - Felt/Mastic	No Asbestos Detected
94-00854	REA01 - Joint Compound	No Asbestos Detected
94-00855	FTW01 - Floor Tile	**10% Chrysotile Asbestos**
94-00856	FTW03 - Floor Tile	**10% Chrysotile Asbestos**
94-00857	FTW04 - Floor Tile	**10% Chrysotile Asbestos**
94-00858	BC008 - Vinyl Baseboard	No Asbestos Detected
94-00859	BC009 - Vinyl Baseboard	No Asbestos Detected
94-00860	GB001 - Gypsum Board	No Asbestos Detected
94-00861	GB002 - Gypsum Board	No Asbestos Detected
94-00862	GB003 - Gypsum Board	No Asbestos Detected
94-00863	ACT01 - Acoustic Tile	No Asbestos Detected
94-00864	ACT02 - Acoustic Tile	No Asbestos Detected
94-00865	CTA01 - Acoustic Tile	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00866	CER01 - Ceramic Tile	No Asbestos Detected
94-00867	CER02 - Ceramic Tile	No Asbestos Detected
94-00868	ARM01 - Insulation	No Asbestos Detected
94-00869	ARM02 - Insulation	No Asbestos Detected
94-00870	HW001 - Insulation	No Asbestos Detected
94-00871	AHVJ1 - Vibration Fabric	No Asbestos Detected
94-00898	EJCM1 - Joint Compound	No Asbestos Detected
94-00899	ECJM2 - Joint Compound	**15% Chrysotile Asbestos**
94-00900	ECJM3 - Joint Compound	No Asbestos Detected
94-00901	RFGM1 - Fiberglass	No Asbestos Detected
94-00902	RFGM2 - Fiberglass	No Asbestos Detected
94-00903	RFGM3 - Fiberglass	No Asbestos Detected
94-00904	RFM01 - Felt and Mastic	No Asbestos Detected
94-00905	RFM02 - Felt and Mastic	No Asbestos Detected
94-00906	RFM03 - Felt and Mastic	No Asbestos Detected
94-00907	REM01 - Mastic	No Asbestos Detected
94-00908	FT001 - Floor Tile	**10% Chrysotile Asbestos**
94-00909	FT002 - Floor Tile	**10% Chrysotile Asbestos**
94-00910	FT003 - Floor Tile	**10% Chrysotile Asbestos**
94-00911	VBC01 - Vinyl Base Cove	No Asbestos Detected
94-00912	VBC02 - Vinyl Base Cove	No Asbestos Detected
94-00913	VBC03 - Vinyl Base Cove	No Asbestos Detected
94-00914	ACTM1 - Acoustic Tile	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00915	ACTM2 - Acoustic Tile	No Asbestos Detected
94-00916	ACTM3 - Acoustic Tile	No Asbestos Detected
94-00917	RJC01 - Mastic	No Asbestos Detected
94-00918	RJC02 - Mastic	No Asbestos Detected
94-00919	EJC01 - Joint Compound	No Asbestos Detected
94-00920	EJC02 - Joint Compound	No Asbestos Detected
94-00921	EJC03 - Joint Compound	No Asbestos Detected
94-00923	ACTH1 - Acoustic Tile	No Asbestos Detected
94-00924	ACTH2 - Acoustic Tile	No Asbestos Detected
94-00925	ACTH3 - Acoustic Tile	No Asbestos Detected
94-00926	RFG01 - Fiberglass Insulation	No Asbestos Detected
94-00927	RFG02 - Fiberglass Insulation	No Asbestos Detected
94-00928	RFG03 - Fiberglass Insulation	No Asbestos Detected
94-00929	RFG04 - Fiberglass Insulation	No Asbestos Detected
94-00930	RFG05 - Fiberglass Insulation	No Asbestos Detected
94-00931	RFG06 - Fiberglass Insulation	No Asbestos Detected
94-00932	RFG07 - Fiberglass Insulation	No Asbestos Detected
94-00934	RFG08 - Fiberglass Insulation	No Asbestos Detected
94-00935	RFG09 - Fiberglass Insulation	No Asbestos Detected
94-00936	CTFH1 - Acoustic Tile	No Asbestos Detected
94-00937	CTFH2 - Acoustic Tile	No Asbestos Detected
94-00938	CTFH3 - Acoustic Tile	No Asbestos Detected
94-00939	CTFH4 - Acoustic Tile	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

Table 1 (Con't)
Bulk Sample Analysis Results

Client Lab #	Description/Location	Results
94-00940	FTAH1 - Floor Tile	**10% Chrysotile Asbestos**
94-00941	FTAH2 - Floor Tile	**10% Chrysotile Asbestos**
94-00942	GYB01 - Gypsum Board	No Asbestos Detected
94-00943	GYB02 - Gypsum Board	No Asbestos Detected
94-00944	GYB03 - Gypsum Board	No Asbestos Detected
94-00945	CTF01 - Ceramic Tile	No Asbestos Detected
94-00946	CTF02 - Ceramic Tile	No Asbestos Detected
94-00947	CTF03 - Ceramic Tile	No Asbestos Detected
94-00948	ABC01 - Gypsum Board	No Asbestos Detected
94-00949	ABC02 - Gypsum Board	No Asbestos Detected
94-00950	STG01 - Insulation	No Asbestos Detected
94-00951	HWI01 - Insulation	No Asbestos Detected
94-00952	EXVJ1 - Dampening Cloth	No Asbestos Detected
94-00953	REH01 - Joint Compound	No Asbestos Detected
94-00954	RVH01 - Mastic	No Asbestos Detected
94-00955	RJH01 - Foam w/Mastic	No Asbestos Detected
94-00956	RMH01 - Mastic	No Asbestos Detected

Polarized Light Microscopy (PLM) Results for
Navy Public Works Center; Code 330
April 6, 1994, Project No. 8332

UEC was retained to provide sample analysis only. UEC can provide further asbestos management services and recommendations upon request. If you have any questions, please call me at (808) 836-0555, extension 218.

Respectfully,

Bill Murray, Project Manager
Unitek Environmental Consultants, Inc.

Samples Analyzed By:

Brian Whitehouse, Laboratory Microscopist
Unitek Environmental Consultants, Inc.

SAMPLE CH[illegible]F CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 47104525

Report to : R. KIYABU
Address : PWC PEARL HARBOR
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00819	FTB01 - FLOOR TILE	1/18			ZIP LOCK		ASBESTOS		
94-00818	FTB02 - " "	"			"		"		
94-00819	FTB03 - " "	"			"		"		
94-00820	FRB04 - " "	"			"		"		
94-00821	FTB05 - " "	"			"		"		
94-00822	FTH02 - " "	"			"		"		
94-00823	FTH03 - " "	"			"		"		
94-00824	FTH05 - " "	"			"		"		
94-00825	BC001 - VINYL BASE BOARD	"			"		"		
94-00826	BC002 - " " "	"			"		"		
94-00827	BC003 - " " "	"			"		"		
94-00828	BC004 - " " "	"			"		"		
94-00829	BC005 - " " "	"			"		"		
94-00830	BC006 - " " "	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD, RAY	Date/Time : 26JAN94	Received by : [illegible]	Date/Time : [illegible]
Ray Ford	1015		

SAMPLE CH[illegible]OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : PWC PEARL HARBOR
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [X] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00831	BC007 - VINYL BASE BOARD	1/18			ZIP LOCK		ASBESTOS		
94-00832	CTF01 - FIBERGLASS ACOUSTIC	1/18			"		"		
94-00833	CTF02 - " "	"			"		"		
94-00834	CTF03 - " "	"			"		"		
94-00835	GBC01 - GYPSUM BOARD	"			"		"		
94-00836	GBC02 - " "	"			"		"		
94-00837	GBC03 - " "	"			"		"		
94-00838	CTA01 - ACOUSTIC TILE	"			"		"		
94-00839	CTA02 - " "	"			"		"		
94-00840	CTA03 - " "	"			"		"		
94-00841	CTA04 - " "	"			"		"		
94-00842	CTA05 - " "	"			"		"		
94-00843	CTA06 - " "	"			"		"		
94-00844	CTA07 - " "	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD, RAY	Date/Time : 26JAN94	Received by : [illegible]	Date/Time : 26Jan94 1015
Ray Ford	1015		

SAMPLE CH[illegible]OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : PWC PEARL HARBOR
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00845	AHU01 - FIBERGLASS	1/19			ZIP LOCK		ASBESTOS		
94-00846	AHU02 - "	"			"		"		
94-00847	AHU03 - "	"			"		"		
94-00848	AHU04 - "	"			"		"		
94-00849	RFA01 - FELT/MASTIC	1/21			"		"		
94-00850	RFA02 - " "	"			"		"		
94-00851	RFA03 - " "	"			"		"		
94-00852	RFA04 - " "	"			"		"		
94-00853	RFA05 - " "	"			"		"		
94-00854	RFA01 - JOINT COMPMD	"			"		"		
94-00855	FTW01 - FLOOR TILE	1/18			"		"		
94-00856	FTW03 - " "	"			"		"		
94-00857	FTW04 - " "	"			"		"		
94-00858	BC008 - VINYL BASE BD	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD, RAY	Date/Time : 26JAN94	Received by : [illegible]	Date/Time : 26Jan94 1615
Ray Ford	1615		

SAMPLE CH[illegible]OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : PWC PEARL HARBOR
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00859	BC009 - VINYL BASE BOARD	1/18			ZIP LOCK		ASBESTOS		
94-00860	GB001 - GYPSUM BOARD	"			"		"		
94-00861	GB002 - " "	"			"		"		
94-00862	GB003 - " "	"			"		"		
94-00863	ACT01 - ACOUSTIC TILE	"			"		"		
94-00864	ACT02 - " "	"			"		"		
94-00865	CTA08 - " "	"			"		"		
94-00866	CER01 - CERAMIC TILE	1/19			"		"		
94-00867	CER02 - " "	"			"		"		
94-00868	ARM01 - INSULATION	"			"		"		
94-00869	ARM02 - "	"			"		"		
94-00870	HW001 - "	"			"		"		
94-00871	AHVJ1 - VIBRATION FABRIC	1/20			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : THIRTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD, RAY	Date/Time : 26JAN94	Received by : [illegible]	Date/Time : 26Jan94 1015
Ray Ford	1015		

SAMPLE CH OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : NAVY PUBLIC WORKS PEARL
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00919	EJC01 - JOINT COMPOUND	1/19			ZIP LOCK		ASBESTOS		
94-00920	ECJ02 - " "	" "			"		" "		
94-00921	ECJ03 - " "	"			"		"		
94-00922	ECJ04 - " "	"			"		"		
94-00923	ACTH1 - ACOUSTIC TILE	"			"		"		
94-00924	ACTH2 - " "	"			"		"		
94-00925	ACTH3 - " "	"			"		"		
94-00926	RFG01 - FIBERGLASS INSUL.	"			"		"		
94-00927	RFG02 - " "	"			"		"		
94-00928	RFG03 - " "	"			"		"		
94-00929	RFG04 - " "	"			"		"		
94-00930	RFG05 - " "	"			"		"		
94-00931	RFG06 - " "	"			"		"		
94-00932	RFG07 - " "	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : BORD, Karl	Date/Time : 27JAN 94	Received by :	Date/Time : 1/27/94

SAMPLE CH[illegible]OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : NAVY PUBLIC WORKS PEARL
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [X] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00933	RFG07 - FIBERGALSS INSUL.	1/19			ZIP LOCK		ASBESTOS		
94-00934	RFG08 - " "	"			"		"		
94-00935	RFG09 - " "	"			"		"		
94-00936	CTFH1 - ACOUSTIC TILE	"			"		"		
94-00937	CTFH2 - " "	"			"		"		
94-00938	CTFH3 - " "	"			"		"		
94-00939	CTFH4 - " "	"			"		"		
94-00940	FTAH1 - FLOOR TILE	"			"		"		
94-00941	FTAH2 - " "	"			"		"		
94-00942	GYB01 - GYPSUM BOARD	1/20			"		"		
94-00943	GYB02 - " "	"			"		"		
94-00944	GYB03 - " "	"			"		"		
94-00945	CTF01 - CERMAIC TILE	"			"		"		
94-00946	CTF02 - " "	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD, [illegible]	Date/Time : 27JAN94 0845	Received by : [illegible]	Date/Time : 1/27/94 0837

SAMPLE CH OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : NAVY PUBLIC WORKS PEARL
CODE 431

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
9400947	CTF03 - CERAMIC TILE	1/20			ZIP LOCK		ASBESTOS		
94-00948	ABC01 - GYPSUM BOARD	"			"		"		
94-00949	ABC02 - " "	"			"		"		
94-00950	STG01 - INSULATION	"			"		"		
94-00951	HWI01 - "	"			"		"		
94-00952	EXVJ1 - DAMPENING CLOTH	"			"		"		
94-00953	REH01 - JOINT COMPOUND	1/21			"		"		
94-00954	RVH01 - MASTIC	"			"		"		
94-00955	RJH01 - FOAM WITH MASTIC	"			"		"		
94-00956	RMH01 - MASTIC	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : TEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : FORD	Date/Time : 27JAN94 0845	Received by :	Date/Time : 1/27/94 0900

SAMPLE CH OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : PWC PEARL
CODE 431

MATRIX (Please check only one)

[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [XX] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00898	EJCM1 - JOINT COMPOUND	1/19			ZIP LOCK		ASBESTOS		
94-00899	ECJM2 - " "	"			"		"		
94-00900	ECJM3 - " "	"			"		"		
94-00901	RFGM1 - FIBERGLASS	"			"		"		
94-00902	RFGM2 - "	"			"		"		
94-00903	RFGM3 - "	"			"		"		
94-00904	RFMO1 - FELT AND MASTIC	1/21			"		"		
94-00905	RFMO2 - " " "	"			"		"		
94-00906	RFMO3 - " " "	"			"		"		
94-00907	REMO1 - MASTIC	"			"		"		
94-00908	FTO01 - FLOOR TILE	1/19			"		"		
94-00909	FTO02 - " "	"			"		"		
94-00910	FTO03 - " "	"			"		"		
94-00911	VBC01 - VINYL BASE COVE	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : FOURTEEN SAMPLES		Transported and Stored in : STORED IN ZIP LOCK BAGS	
Relinquished by : [signature]	Date/Time : 27JAN94 0850	Received by : [signature]	Date/Time : 1/27/94 0850

SAMPLE CH OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 7340000
Contact Person : R. KIYABU
Phone Number : 471-4525

Report to : R. KIYABU
Address : PWC PEARL
CODE 420

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [X] Other (Specify) ACBM

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00912	VBC02 - VINYL BASE COVE	1/19			ZIP LOCK		ASBESTOS		
94-00913	VBC03 - " " "	"			"		"		
94-00914	ACTM1 - ACOUSTIC TILE	"			"		"		
94-00915	ACTM2 - " "	"			"		"		
94-00916	ACTM3 - " "	"			"		"		
94-00917	RJC01 - MASTIC	1/20			"		"		
94-00918	RJC02 - "	"			"		"		

REMARKS (Special handling, field conditions, etc.) :

Sampler(s) : SEVEN SAMPLES		Transported and Stored in : STORED IN PLASTIC BAGS	
Relinquished by : FORD, Robert	Date/Time : 27JAN94 0830	Received by :	Date/Time : 1/27/94 - 8:25

APPENDIX A
REFERENCES & CORRESPONDENCE

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

CEPOD-ED-DC 30 Dec 94

MEMORANDUM FOR RECORD

SUBJECT: Minutes of meeting for FY95 OMAR Pkg O-2, Replace Washrack, Install Oil/Water Separator and Ventilation Fans, USARC, Hilo, Island of Hawaii

1. A meeting was held at 8:30 am at POD on 20 Dec 94 to determine the scope of work for the subject project.

2. Specific questions concerning the original scope of work are as follows:

a. Grease rack removal includes removal of the concrete ramp and sump structures, including environmental remediation as required (to be determined by Environmental Divn). Recommended separation of the soil remediation portion of this project, preferably to be done prior to the washrack portion of the project. The reason for this recommendation is that the soil remediation project may be very large and must be on a unit price basis (the exact extent of remediation will not be known until they actually start excavating). LTC Fox agreed that a separate contract for soil remediation could be done.

b. Verified that after removal of concrete grease rack structure and any contaminated soil, backfill and turfing of the excavated area will be done (in soil remediation contract).

c. Richard Mori's questions about the mechanical ventilation fans for the supply room were referred to Capt Takishita (935-9288).

d. Numerous questions regarding the existing washrack usage and requirements for the new washrack were referred to Capt Takishita for answers. (Norman will meet with him tomorrow and obtain the answers at that time.)

e. Verified that Hilo washrack needs to be covered? It is highly desirable if the budget allows.

2. We presented LTC Fox with a proposal for a water treatment system (Ultrasorb) as an alternative to the Wailuku washrack/sedimentation basin/oil-water separator system. (Brief comparison between the conventional washrack system and Ultrasorb is attached.)

a. Chris Tychsen from Pacific Turf explained how the Ultrasorb system at Pacific Machinery works and after the meeting met us at the site and showed us how the system works

b. Richard Abe was concerned about usage of this system for the reserve center since the washrack would be used intermittently and the mechanical treatment system may be subject to more breakdown from lack of usage than the traditional sedimentation tank. The existing system inspected was at Pacific Machinery in Waipahu where the system is used regularly during a 40 hour work week. Mr. Chris Tychsen indicated that the system is always circulating and that they have not had any problems thus far with the systems in place. (However, most of the systems in Hawaii are very new.) More information needs to be obtained from the Manufacturer about this concern. (Mfr indicates that timers can be easily added to system to circulate system every few days. This would prevent problems with lack of use.)

c. POD will present LTC Fox with information on conventional system and proposed ultrasorb system for selection of system to be used for this project.

3. Richard Abe's comments regarding this meeting is attached.

LYNETTE KWOCK, P.E.
Civil Branch, Design Division

3 Attachments

DIFFERENCES SEEN BY USER:

ITEM	CONVENTIONAL SYSTEM	ULTRASORB SYSTEM
Maintenance/ checking equipment	Periodically drain sediment basin, scoop out debris; daily add chlorine tablets to prevent algae growth (brown algae) (If no roof, open valve to sewer system & shut after usage)	Daily check of system filters to determine if replacement is required; periodically replace filters, hydrocarbons, etc.
Sediment removal	Sedimentation basin plus huge roof covering (Required due to heavy rains in Hilo)	Centrifugal Coalescing Separator
Oil removal	Oil/Water Separator	Aeration Twr, Hydrocarbon Absorber, etc.
Sump Pump	Required to pump greywater to sanitary sewer	Required to pump to Ultrasorb system
NPDES Permit	Required prior to discharge into sanitary sewer	Not required.
6" sewer line + SMHs to San. Sewer	Required to get greywater to Sanitary sewer	Not required
Disposal cost of Sediment	Testing for heavy metals & disposal at landfill	System removes hydrocarbons & metal Dispose at landfill
Disposal of filters	Not required	May be done on Oahu-Check w/Chris Tyson

COMPARISON OF CONVENTIONAL WASHRACK/SEDIMENTATION BASIN/OIL/WATER SEPARATOR VERSUS WASHRACK/ULTRASORB SYSTEM

BASIC DIFFERENCES:

ITEM	CONVENTIONAL SYSTEM	ULTRASORB SYSTEM
WASHRACK	WASHRACK CATCHES LARGE CHUNKS OF DEBRIS, SILT IN SUSPENSION GRAVITY FLOWS TO SEDIMENTATION TANK	WASHRACK CATCHES LARGE CHUNKS OF DEBRIS, SILT IN SUSPENSION GRAVITY FLOWS TO SUMP, SUMP PUMP PUMPS SUSPENSION TO ULTRASORB SYSTEM-- (CENTRIFUGAL COALESCING SEPARATOR)
SEDIMENTATION BASIN	SETTLES OUT FINES & SILT IN SUSPENSION	CENTRIFUGAL COALESCING SEPARATOR REMOVES SILT & FINES IN SUSPENSION)
OIL/WATER SEPARATOR	REMOVES OIL PRIOR TO DISCHARGE TO SANITARY SEWER	AERATION TOWER, HYDROCARBON ABSORBER, INCLINE TUBE COALESCOR, OIL SKIMMER, & HYDROCARBON ACCUMULATOR REMOVES OIL AND TREATS WATER FOR REUSE

ROSTER OF CONFERENCE ATTENDEES

CONFERENCE FY95 OMAR Pkg 0-2, Replace Washrack; Install O/W Separator & Ventilation Fans, USARC, Hilo

DATE 12/20/94 PLACE BLDG 230 Rm 317A TIME 0830 hrs

NAME (PLEASE PRINT)	ORGANIZATION	TELEPHONE
Chris Tyrksen	Pan Pacific Environmental Group	676-8661
GLENN OSHIRO	CEPOD-ED-MI	438-8520
DAVID OKADA	CEPOD ED-DC	438-8411
RICHARD MORI	ED-DL	438-7070
WAYNE MITSKO	IX CORPS (R)/9TH ARCOM	438-5091
LTC Tim Fox	IX Corps/9th ARCOM	438-1512
Lynette Kwock	CEPOD-ED-DC	438-7066
Richard Abe	CEPOD-ED-TS	438-9552

DD FORM 62
7 JULY 1970

Attachment 2

CEPOD-ED-DC 27 Dec 94

MEMORANDUM FOR RECORD

SUBJECT: Site visit for FY95 OMAR Pkg O-2, Replace Washrack, Install Oil/Water Separator and Ventilation Fans, USARC, Hilo, Island of Hawaii

1. A field investigation and scoping meeting was held on 21 Dec 94 at the USARC facility in Hilo. Norman Kaneshige (CEPOD-ED-DC), Glenn Oshiro (CEPOD-ED-MI) and Capt Takishita (Hilo USARC) were in attendance.

2. Capt Takishita concurred that after removal of the concrete grease rack structure and any contaminated soil, backfill and turfing of the excavated area will be done (in soil remediation contract). No pavement replacement is required.

3. Capt Takishita said that currently they wash their vehicles at another site.

a. Currently they do not have a pressure washer and they do not think they need one. A 1-1/2 inch hose bib with fire hose (similar to Wailuku washrack) will be adequate to meet their washing needs.

b. They do not have a water cannon (demucker) for shooting off large clumps of soil and do not think they need one.

4. Existing washrack is approximately 30' x 13'. Wailuku washrack is 20' x 50'. The same size washrack will meet their needs at the Hilo USARC.

a. Drive through capability is required. Capt Takishita understands that it requires more space and indicated where he wanted the washrack and appurtenances sited. He also wanted a roadway from the parking lot going around the north end of the USARC facility connecting to the other parking lot in addition, he requested additional parking in the area. He will prepare a sketch and send it to us for incorporation into the design.

5. The Hilo USARC already is fenced in and does not need any additional fencing for this project.

4. According to Capt Takishita, the maximum usage for the proposed washrack would be washing all 36 vehicles four (4) times per year plus periodically washing a few vehicles between those regular washingss.

a. When they wash all of their vehicles, it takes them four (4) hours.

5. Mr. Kaneshige explained that we are considering using a recycling system which would involve settling out the majority of the soil solids prior to entering the recycling unit.

a. Capt Takishita confirmed that they do have the manpower and would be willing to shovel out or pump out sludge from the trench drains and shovel up large chunks of mud and dirt that fall on the washrack surface prior to each days usage of the washrack (procedures required by the proposed recycling system).

6. Capt Takishita is the point of contact for all future questions that come up for this project.

7. Hosebib pressure reading taken at the Hilo USARC near the proposed washrack was 90 psi (gauge was not calibrated). Fire hydrant flow tests need to be obtained from the County of HI Board of Water Supply for the fire hydrant nearest to the facility

Norman Kaneshige
Civil Branch, Design Division

APPENDIX E
STRUCTURAL COMPUTATIONS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR, Wash rack, o/water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO.
COMPUTED BY [illegible] DATE 4/95 CHECKED BY [illegible] DATE 5/95

DESIGN ANALYSIS

$\sqrt{145}$

Slope = 1 in 12 Bldg height = 18'

$\theta = 4.75°$

Eves = 4'

Bldg size = 30' x 50'

Determine wind loads

Main - wind force resisting system.

other structures

$$F = q_z G_h C_f A_f$$

$$q_z = 0.00256 K_z (IV)^2$$

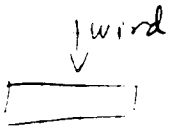
$I = 1.0$, $V = 80$ mph

at $h = 18' \Rightarrow K_z = 0.87$ Exposure C.

$$q_z = 0.00256(0.87)[1.0 \times 80)]^2 = 14.254$$

G_h = Gust Response = 1.29

ASCE 7 Table 11 - Force Coefficients for Monoslope Roofs over Unenclosed Buildings and Other Structures C_f



B = 50 normal to wind direction

L = 20 parallel to wind direction

$L/B = 20/50 = 0.40$

using $\theta = 10°$, $L/B = 1/2 \Rightarrow C_f = 0.55$

POD Form 115
1 Jan 92

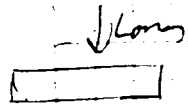
U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE: FY 95 OMAR, Washrack, O&V Wa SH NO. ____ OF ____ SHS
LOCATION: Hilo SECTION: Structure
DRAWING(S) NO.
COMPUTED BY: [illegible] DATE: 4/95 CHECKED BY: [illegible] DATE: 5/95

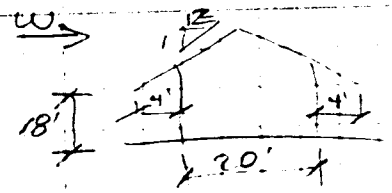
DESIGN ANALYSIS

Determine center of Pressure. $\Rightarrow x/L = 0.3$ for $\theta = 10$ to $20°$

$x = (0.3)(20) = 6$ ft from windward edge of roof. if mono slope roof.



$A_f = \frac{1}{2}(30+6)(50') = 1583\ ft^2$



$F = (14.254)(1.29)(0.55)(158.3) = 1601.26$ lbs horizontal

(q_z, G_h, C_f, A_f)

Determine uplift -

Main wind force resisting systems

$$p = q G_h C_p - q_h (GC_{pi})$$

$h = 18.5'$
$L = 28'$
$h/L = 0.66$

$C_p =$

for $h/L = 0.5$, $\theta = 10\text{-}15°$, $C_p = -0.9$

$$GC_p = \pm 0.25$$

$$p = 14.25(1.29)(-0.9) - (14.25)(+0.25) = -16.54 - 3.56$$

$$= -20.1 \text{ psf}$$ uplift.

Component & Cladding

$$p = q_h[(GC_p) - (GC_{pi})]$$

$\theta < 10°$ Assume $A \approx 10\ ft^2$

$GC_p =$ -4 corner
-2.6 eves
-1.4 middle.

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMA, Washrack, Oil/water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. ____
COMPUTED BY Pa DATE 4/95 CHECKED BY CMM DATE 5/95

DESIGN ANALYSIS

$P = 14.25(GCp) - \underbrace{14.25(+0.25)}_{3.563} = -60.56$ psf corners

$= -40.61$ psf eves.

$= -23.51$ psf middle.

Corner $A = 4(4)(4) = 64$ ft²
Middle $= 30(50) = 1500$ ft²
Eves $= (2)(50-8)(4) =$ middle $= 336$ ft²

Total Uplift on structure $= \underset{\text{corners.}}{-60.56(64)} + \underset{\text{eves}}{-40.61(336)} \underset{\text{middle}}{-23.51(1500)}$

$= -3876 - 13645 - 35265 = -52,786$ lbs

Total Uplift on structure $= -52,786$ lbs

$\Rightarrow$ using Mat footing

thickness of slab $= \frac{52786}{(30)(50)(150)} = 0.23' \approx 3''$ slab.

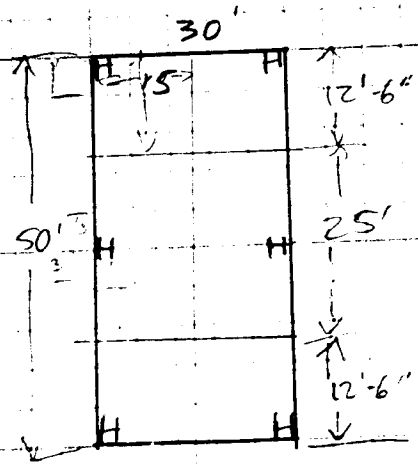
POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR, Washrack Oil/Water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO.
COMPUTED BY RL DATE 4/95 CHECKED BY [illegible] DATE 5/95

DESIGN ANALYSIS

Determine uplift of each Column



Tributary Area
End Column = (15)(12.5-4) = 128 ft²
Eve Area = (12.5-4)(4)+(15-4)(4) = 78 ft²
Corner = (4)(4) = 16 ft²
Middle Column = (15)(25) = 375 ft²
Eve Area = (25)(4) = 100 ft²

Uplift for End Column

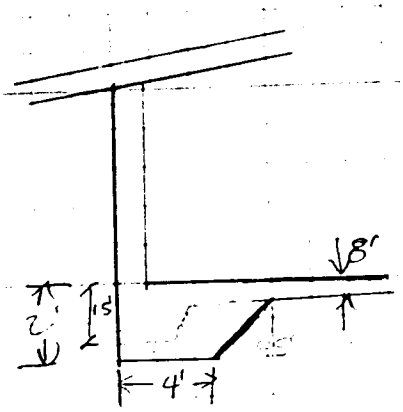
= 128 (-23.51) + 16 (-60.56) + 78 (-40.61) =
= -3009 - 969 - 3167.5
= -7146 lbs

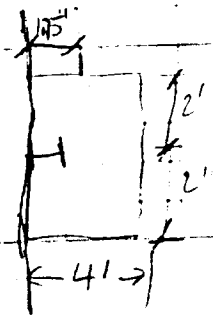
Uplift for Middle Column

= 375 (-23.51) + 100 (-40.61) = -8812 - 4061.
= -12,874 lbs

DL - (2)(4)(4)(150) = 4800
- (25-4)(1.5)(1.75)(150) = 8268

13069 lbs > 12874
say OK.





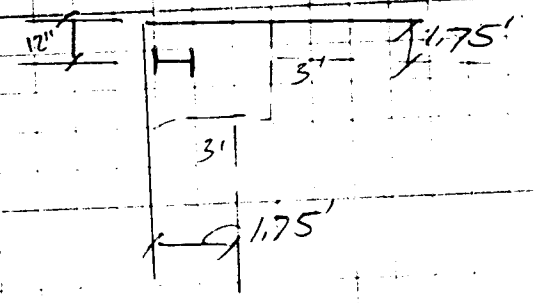
POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR, Washrack, Oil/Water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. ____
COMPUTED BY RC DATE 4/95 CHECKED BY [illegible] DATE 5/95

DESIGN ANALYSIS

Uplift for corner column.



DL = (2)(3)(3)(150) = 2700

= (10 - 3)(1.5)(1.75)(150) = 2756

thicken edge = (12.5 - 3)(1.5)(1.75)(150) = 3740

9196 lbs. > 7146

Say OK

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR Washrack, Oil/Water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. ____
COMPUTED BY PC DATE 4/95 CHECKED BY [illegible] DATE 5/95

DESIGN ANALYSIS

Seismic Design:

$$V = \frac{ZIC}{R_w} W \qquad I = 1.0$$

Zone 4 ⇒ Z = 0.40 by TM 809-10

$$C \le 2.75$$

Max C = 2.75

Ordinary Moment resisting frame - Steel $R_w = 6$

$$C/R_w = \frac{2.75}{6} = 0.458 > 0.075$$

Determine weight of structure = 5 lb/ft² building
1 lb/ft² Misc.
6 lb/ft² Total

weight of structure = (6)(30+8)(50)
= 11400 lbs.

$$V = (0.4)(1.0)(0.458)(11400) = 2088 \text{ lb} > 1601.26$$

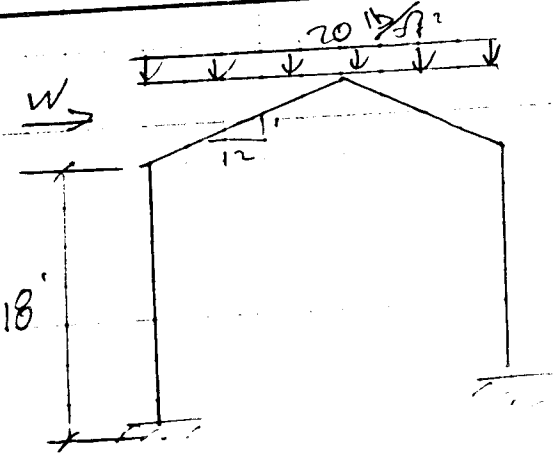
∴ $F_{seis.}$ = 2088 governs.

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

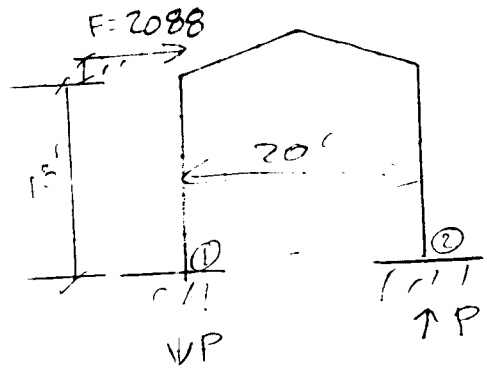
PROJECT TITLE FY95 OMA R Washrack Oil/Water SH NO. ____ OF ____ SHS
SECTION Structural
LOCATION Hilo
DRAWING(S) NO. ____
COMPUTED BY RL DATE 4/20/95 CHECKED BY ____ DATE 5/95

DESIGN ANALYSIS



DL Corner Col = 6(12.5)(15+4)
= 1425 lbs.

DL Center Col = 6(25)(15+4)
= 2850 lbs



Compute addition load in Col 2 due to overturning moment.

$M_{wind} = 2088(19) = 39672$ lbs.ft

Overturning Load on col 2 = 39672/20
= 1,984 lbs.

$LL_{Col2} = (25)(15)(20) = 7500$ lbs.

Total load on column P = 1984 + 7500 + 2850 = 12,333 lbs.

Soil Bearing pressure = $\frac{12\,333}{16}$ = 771 psf OK.

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR Washrack Oil/Water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. ____
COMPUTED BY RC DATE 4/95 CHECKED BY ____ DATE 5/95

DESIGN ANALYSIS

Compute wind pressure on metal building - assume enclosed for foundation only.

$P = q\, G_h C_p - q_h\, G C_{pi}$ $\qquad q_z = 14.25$

$G_h = 1.29$

$C_p = 0.8$ windward.

$L/B = 20/50 = 0.4 \Rightarrow C_p = -0.5$

windward $\quad P = 14.25\,(1.29)(0.8) + 14.25(0.25) = 14.70 + 3.56 = 18.27$ psf

leeward $\quad P = 14.25(1.29)(0.5) + 14.25(-0.25) = -9.19 + 3.56 = -12.75$ psf

Mid Wall height = 19' $\qquad$ Bay spacing 25'

Windward wall = 18.27 (25) = 456.75 lb/ft

leeward wall = -12.75 (25) = 318.75 lb/ft

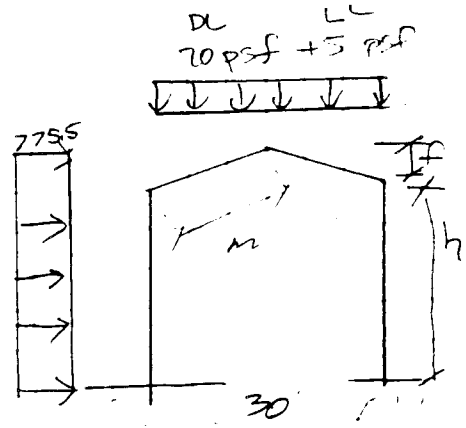
Total lateral Force due to wind = 775.5 lb/ft
(if enclosed)

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMAR Washrack Oil/Water SH NO. _____ OF _____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. _____
COMPUTED BY KL DATE 4/95 CHECKED BY WM DATE 5/95

DESIGN ANALYSIS



Compute load on tie beam.

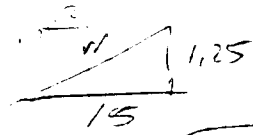
assume I for all members are equal $I_2/I_1 = 1.0$

Roof LL+DL = 20 + 5 = 25 psf

= (25)(25) = 625 lb/ft

$m = \sqrt{\ } = 10.05$

w = 775.5 lb/ft



$Q = f/h = \frac{1.25}{18} = 0.0694$

$m = \sqrt{15^2 + 1.25^2} = 15.052$

$K_1 = \frac{I_2}{I_1}\frac{h}{m} = \frac{18}{15.052} = 1.20$

Uniform vertical load

$H_E = C_1 w \ell^2/h$ $C_1 = 0.059$ from table 1

$H_E = 0.059(625)(30)^2/18 = 1844$ lbs.

Uniform horizontal load against total height.

$H_E = C_6 wh$ $C_6 = 0.28$ from Chart IV

$H_E = 0.28(775.5)(18) = 3908$ lbs.

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 OMA Washrack Oil/water SH NO. ____ OF ____ SHS
LOCATION Hilo SECTION Structural
DRAWING(S) NO. ____
COMPUTED BY VK DATE ____ CHECKED BY [illegible] DATE 5/95

DESIGN ANALYSIS

Total horizontal Force in the beam

$$F = 1844 + 3908 = 5752 \text{ lbs.}$$

Rebar Area need $= \frac{5752}{0.6(40{,}000)} = 0.2397 \text{ in}^2$

$\therefore$ use 2 - #4 $\quad A_s = 2(0.2) = 0.4 \text{ in}^2$

POD Form 115
1 Jan 92

APPENDIX F
MECHANICAL COMPUTATIONS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE	F/95 US ARMY RESERVE CENTER	SH NO. ____ OF ____ SHS	
LOCATION	HILO HAWAII	SECTION	MECH
DRAWING(S) NO.			
COMPUTED BY	RM	DATE 4/95	CHECKED BY ____ DATE 4/95

DESIGN ANALYSIS

U- VALUE OF COEFFICIENT OF HEAT TRANSFER
R- RESISTANCE °F·ft²·h/BTU
U= 1/R

FOR EXTERIOR WALL
NORTH AND SOUTH & EAST

	R
OUTSIDE AIR FILM	.17
8" CONCRETE .22/IN	1.76
INSIDE AIR	.68
	R_T = 3.61

$U_T = 1/R_T = 1/2.61$
$= .383$

U VALUE FOR ROOF

	R
OUTSIDE AIR	.92
METAL ROOF	.27
INSIDE AIR	.68
GYPSUM BOARD	.56
INSIDE AIR	.68
	R_T = 3.11

$U_T = 1/R_T = 1/3.11 = .322$

PARTITION WALL

	R
INSIDE AIR	.68
8" CMU	1.76
INSIDE AIR	.68
	R_T = 3.12

$U_T = 1/R_T = 1/3.12 = .321$

POD Form 115
1 Jan 92

U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

PROJECT TITLE FY95 RESERVE CENTER HVAC SH NO. _____ OF _____ SHS
LOCATION _____ SECTION _____
DRAWING(S) NO. _____
COMPUTED BY BM DATE _____ CHECKED BY _____ DATE _____

DESIGN ANALYSIS

SELECT WINDOW AIR CONDITIONER (WAC)
TO DEHUMIDIFY THE ROOM SPACE, IN CONJUNCTION
WITH NEW PAINTING AND SEALING OF EXTERIOR WALLS

POD Form 115
1 Jan 92

AIR CONDITIONING LOAD ESTIMATE

DATE	BASE	ESTIMATOR	PAGE OF PAGES
14	2		

BUILDING NO.	SPACE NO.	SPACE USE	AREA	DAILY OPERATION
ASSEMBLY		RESERVE CENTER 8"CMU	140 (10 x 14) SF	10 HR

DAILY RANGE F | ELEV 36 FT | LAT 19 °

ESTIMATE FOR: [X] PEAK LOAD [ ] PARTIAL LOAD | SUN TIME 1600 HR

CONDITIONS	DB	WB	% RH	DP	GR PER LB
OUTSIDE	83	74	26		112
ROOM	75	63	50		64
DIFFERENCE	8	XXX	XXX	XXX	48

SELECTED ROOM CONDITIONS DB WB % RH

ITEM	QUANTITY	GAIN	FACTOR	BTU/HR
SOLAR GAIN GLASS			SC SHGF CLF	
N GLASS		SF x	x	
S GLASS	18	SF x	.95 43 x .50	368
W GLASS		SF x	x	
E GLASS	18	SF x	.95 212 x .25	906
SOLAR & TRANS-WALLS & ROOF			U VALUE CLTD	
N WALL	112	SF x	.383 x 17	729
S WALL	112	SF x	.383 x 32	1 373
W WALL		SF x	x	
E WALL	80	SF x	.383 x 34	1 042
ROOF	140	SF x	.322 x 74	3 336
TRANSMISSION GAIN-OTHER			CLTD U VALUE	
ALL GLASS	36	SF x	14 FX 1.31	660
PARTITION	80	SF x	5 FX .383	153
CEILING		SF x	FX	
FLOOR		SF x	FX	
O.A. INFIL		CFM x	FX 1.08	
INTERNAL HEAT				
PEOPLE		2 x	230	460
POWER			x	
LIGHTS	140 x 3.5	WATTS x 3.4	x 1.25 x 1.0	2 092
		FT²		
		SEN. HT. SUBTOTAL		
STORAGE CREDIT - SEE NOTE				
ROOM SENSIBLE HEAT				11 109
SUPPLY DUCT HEAT GAIN	% +	SUPPLY DUCT LEAKAGE	% + SUPPLY FAN H.P 5 %	555
O.A. 40	CFM x	8	FX .18 B.F. x 1.08	35
EQUIVALENT SENSIBLE HEAT				11 699
LATENT HEAT				
INFILTRATION		CFM x	G/LB x 0.68	
PEOPLE		2	x 190	380
VAPOR TRANSMISSION - SEE NOTE				
ROOM LATENT HEAT				380
SUPPLY DUCT LEAKAGE GAIN			5 %	20
O.A. 40	CFM x	48	G/LB x .10 B.F. x 0.68	131
EQUIVALENT LATENT HEAT				531
EQUIVALENT TOTAL HEAT				12 230
O. A. HEAT				
SEN. 40	CFM x	8	FX (1- .10 BF) x 1.08	311
LAT. 40	CFM x	48	G/LB x (1- .10 BF) x 0.68	1 175
RETURN DUCT HEAT GAIN	% +	RETURN DUCT AIR GAIN	% + RETURN/SUPPLY FAN H.P. 10 %	149
COOLING COIL GRAND TOTAL HEAT				13 865
PUMP H.P.	% + PIPING HEAT GAIN		%	
REF EQUIPMENT GRAND TOTAL HEAT				

OUTSIDE AIR

VENTILATION REQ'D	SMOKING PERMITTED	PEOPLE x	CFM/PERSON =
	SMOKING NOT PERMITTED	2 PEOPLE x 20	CFM/PERSON = 40
	AREA	SF x	CFM/SF =
			REQ'D CFM
INFILTRATION	CRACK	FT x	CFM/FT =
	DOORS	# x	CFM/DOOR =
			=
			TOTAL CFM
EXH FAN			=
			=
			CFM

TOTAL O.A. THRU COOLING COIL = _____ CFM

Coordination of cooling design and heating design is essential and a study of the heating estimate should be made at this time.

APPARATUS DEWPOINT TEMPERATURE

ESHF = ▶ EQUIV SEN HT / ▶▶ EQUIV TOTAL HT = 0. ____

INDICATED ADP ___ F. SELECTED ADP = ___ F

COIL AIR QUANTITY

SYSTEM ΔT = (1- BF) (TRM F-TADP F) = ___ F

CFM = ▶ EQUIV SEN HT / 1.08 x F SELECTED ΔT = _____

ROOM SUPPLY AIR

■ ROOM SEN HEAT / 1.08 x F SELECTED ROOM ΔT = _____ CFM

REHEAT REQ'D _____ BTU/HR - SEE NOTE _____

NOTES (REF AFM 88-15, ATCH 13)

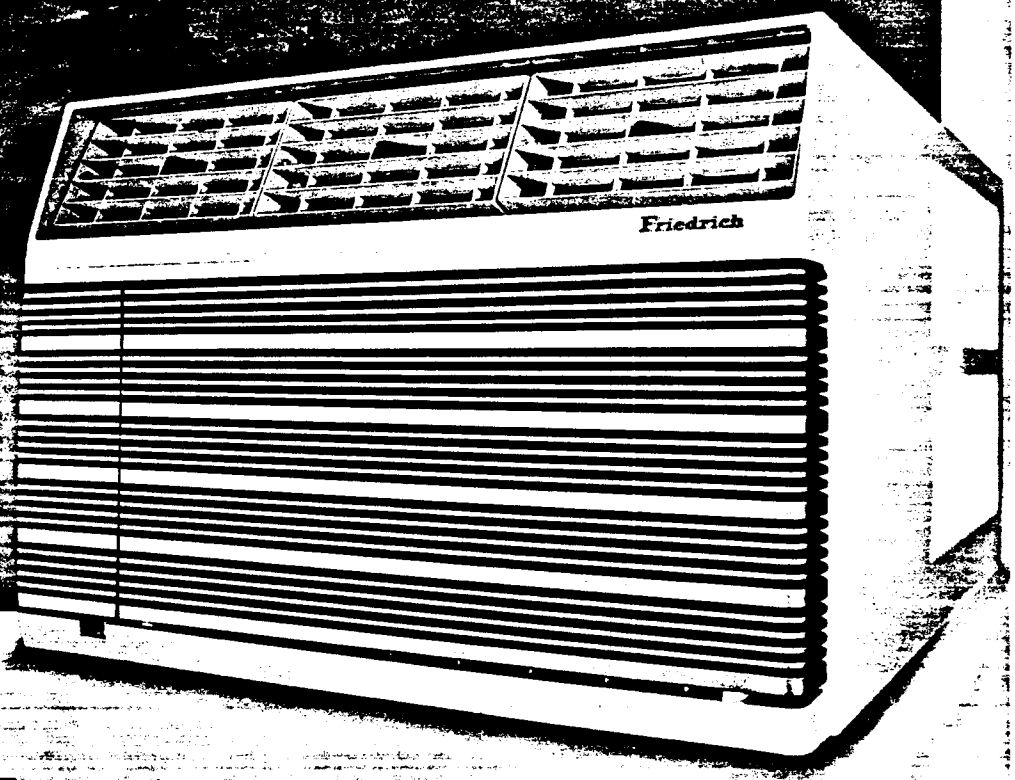
SELECT FRIEDRICH (WAC)
SM 14110A 14000 BTU
115V 12 AMP 1330 WATT

SUMMARY			CHECK FIGURES		
S.A.	=	CFM	SF/TON	=	SF/TN
O.A.	=	CFM	S.A./SF	=	CFM/SF
EXH AIR	=	CFM	O.A./S.A.	=	%
REF EQUIP	=	TONS			

AF FORM JUN 73 108 PREVIOUS EDITION WILL BE USED.

By far, the most energy efficient models in the industry. EER's to 12.0!

Feature for feature, nothing measures up to a Friedrich. The exclusive five-speed fan and six-way air flow control let you put cool air where you need it most. Magna-1 high tech copper coils and rotary compressor provide exceptional cooling power and reduced operating costs. The deluxe sound insulation package assures quiet operation. QuietMaster sets the standard for quality, efficiency and dependability!



7,200 to 14,000 BTU/Hr.
EER's from 10.0 to 12.0

Friedrich

QuietMaster®

115 VOLT

QuietMaster®

115 VOLT

- Money Saver® Button.
- Anti-ice device.
- Totally enclosed fan motor.
- Slide-out chassis for easy installation and maintenance.
- Even Temp heat anticipating thermostat.
- Exclusive mosquito trap.
- Large condenser fan with slinger ring.
- Fresh air intake/stale air exhaust.
- Insulated suction line.
- Long-lasting washable filter.
- Removable filter grille.
- Superior, durable, 2-coat, baked enamel finish.
- Neutral color blends with any decor.

COOLING PERFORMANCE

Model	Cooling Capacity BTU/Hr.—AHAM	Electrical Characteristics (60 Hertz) Volts Rated	Amps AHAM	Watts	EER-Energy Efficiency Ratio BTU/Watts Hr.	Moisture Removal Pints/Hr.	Air Direction Controls	Room Side Air Circulation CFM	Fresh Air CFM	Exhaust Air CFM
SS07H10A	7200	115	6.6	655	11.0	1.5	6-way	200	17	39
SS08H10A	8200	115	7.5	780	10.5	1.4	6-way	300	17	39
SS09H10A	9000	115	7.4	820	11.0	1.5	6-way	300	17	39
SM10H10A	10300	115	7.5	860	12.0	2.0	6-way	270	25	34
SS12H10A	12000	115	10.7	1200	10.0	3.0	6-way	320	17	39
SM14H10A	14000	115	12.0	1330	10.5	3.3	6-way	375	25	34

INSTALLATION INFORMATION

Model	Dimensions Height	Width	Depth Overall	Depth Hood to Louvers	Minimum Extension Into Room	Minimum Extension Outside	Window Width Minimum	Maximum	Thru-The-Wall Finished Hole Height	Width	Supply Cord—all 6' with Right Angle Plug Circuit Rating, Breaker or T-D Fuse	Plug Face (NEMA#)	Appearance (Facing Blades)	Weight Net	Shipping
SS07H10A	15 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	15 15/16"	26 3/16"	125V-15A	5-15P		106#	118#
SS08H10A	15 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	15 15/16"	26 3/16"	125V-15A	5-15P		108#	120#
SS09H10A	15 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	15 15/16"	26 3/16"	125V-15A	5-15P		111#	123#
SM10H10A	17 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	17 15/16"	26 3/16"	125V-15A	5-15P		123#	135#
SS12H10A	15 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	15 15/16"	26 3/16"	125V-15A	5-15P		120#	132#
SM14H10A	17 1/16"	25 15/16"	27 1/4"	9 5/8"	3 5/8"	15 1/8"	27 7/8"	42"	17 15/16"	26 3/16"	125V-15A	5-15P		128#	140#

ll Friedrich Room Air Conditioners include accessories for window or thru-wall installation.

ue to continuing engineering research and technology, specifications are subject to change without notice.

ade in
nerica

Friedrich

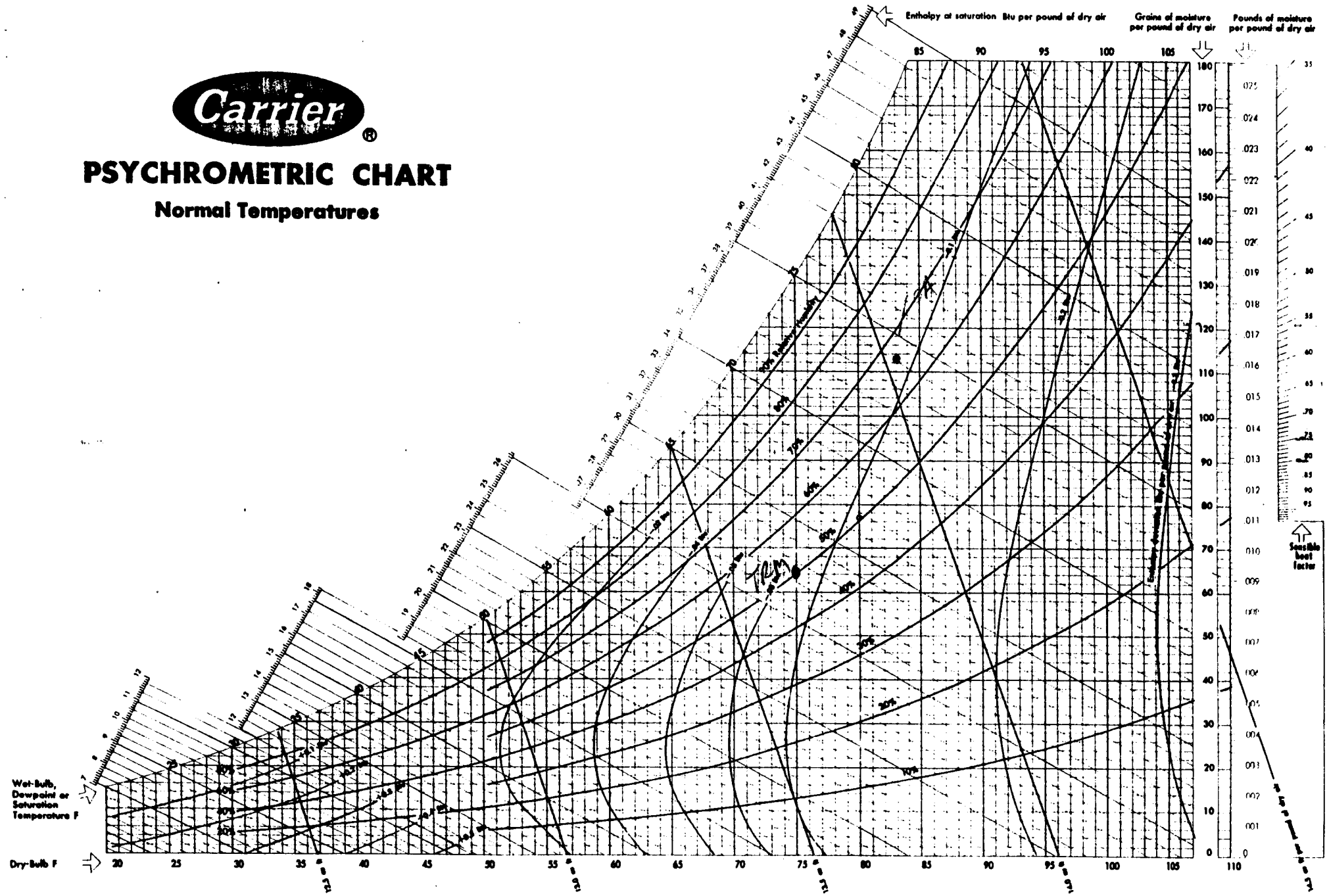
Friedrich Air Conditioning Co.
Post Office Box 1540 San Antonio, Texas 78295-1540

Printed in U.S.A.

Carrier®

PSYCHROMETRIC CHART

Normal Temperatures



Below 32 F, properties and enthalpy deviation lines are for ice.

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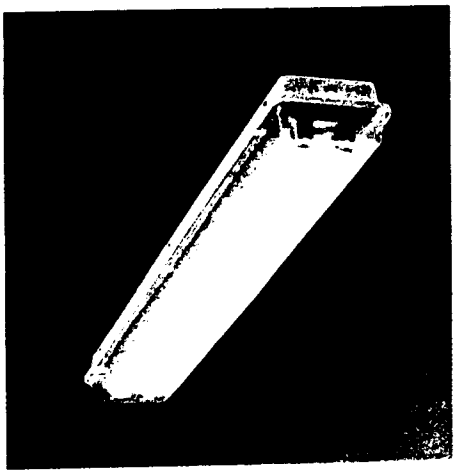
Code (794-017)

APPENDIX G
ELECTRICAL COMPUTATIONS

DESIGN DIVISION
HONOLULU ENGINEER DISTRICT



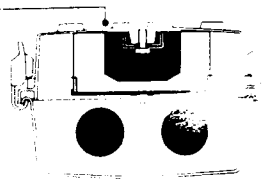
VT Industrial/Vaportite

- Equipped with Energy Saving Ballasts/Complies with Federal Energy Efficiency Standards/E
- Reinforced Fiberglass Housing/ Waterproof and Chemical Resistant
- Low Brightness Acrylic or Polycarbonate Lens
- Completely Gasketed/Suitable For Damp Locations
- UL Listed/Optional Wet Location Listing Available
- Heavy Duty Cam Latching
- Baked White Enamel Finish Liner/ High Reflectance
- Vandal Resistant Feature Available
- Also Available in Tandem 8' Lengths

Design Features

Construction

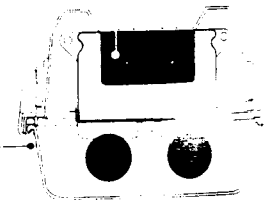
Fiberglass is reinforced polyester and self-extinguishing (ASTM D635-74) plastic of a permanent pearl gray color. Top of housing has eleven embossments, (4' units), 22 embossments (8' units), providing a range of mounting locations. A 7/8" hole is normally provided at each end of housing for conduit entry for continuous fed. PVC plugs and nuts are provided for sealing holes. Closed cell neoprene gasketing is bonded to the housing to form continuous seal for the diffuser. Six cam latches (4' unit), 12 cam latches (8' unit) clamp diffuser tightly to housing.



4' or 8' 1 or 2 Lamps

Electrical

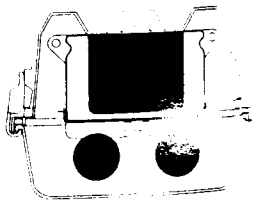
Unit has internal full metal liner for positive grounding and maximum protection and rigidity. Ballast, CBM/ETL Class P certified suitable to plus 50°F. (Cold temperature ballasts are available suitable to 0°F. on special order.) Pressure lock lampholders. UL listed and IBEW labeled. System Input Watts: (Energy Saving Ballast and Energy Saving Lamps) (Energy Saving Ballast and Standard Lamps) (Standard Ballast and Standard Lamps) 140 (42) (47) (N/A), 240 (72) (82) (N/A), 148 (N/A) (N/A) (59), 196 (N/A) (N/A) (96), 248 (N/A) (N/A) (94), 296 (120) (152) (N/A), 148HO (N/A) (N/A) (82), 248HO (N/A) (N/A) (138), 196HO (N/A) (N/A) (137), 296HO (203) (233) (N/A).



4' or 8' 1 or 2 Lamps

Shielding

"DR" - Clear low brightness pattern acrylic with high impact additive. 15%
"DR-100" - Clear low brightness pattern acrylic with high impact additive. 100%.
"LEX" - High impact clear low brightness pattern polycarbonate. LEXAN



4' or 8' 1 or 2 Lamps

Construction Notes
(1) Standard Ballast (Non-LE3)

Catalog Number	Lamps	Ballast	Nominal Size (ft.)	Wt.	Dimensions (in.) Length	Width	Height	Channel Diagram*
VT-140 DR	1F40	Rapid Start	4	15	52	8	4-5/8	17
8TVT-140 DR	1F40	Rapid Start	8	30	102	7-7/8	5-5/8	17
VT-240 DR	2F40	Rapid Start	4	15	52	8	4-5/8	17
8TVT-240 DR	2F40	Rapid Start	8	30	102	7-7/8	5-5/8	17
VT-148 DR[1]	1F48	Slimline	4	15	52	7-7/8	4-5/8	17
VT-196 DR[1]	1F96	Slimline	8	34	102	7-7/8	5-5/8	17
VT-248 DR[1]	2F48	Slimline	4	15	52	7-7/8	4-5/8	17
VT-296 DR	2F96	Slimline	8	34	102	7-7/8	5-5/8	
VT-148HO DR[1]	1F48	800MA	4	19	52	7-7/8	5-5/8	
VT-248HO DR[1]	1F48	800MA	4	19	52	7-7/8	5-5/8	
VT-196HO DR[1]	1F96	800MA	8	35	102	7-7/8	5-5/8	
VT-296HO DR	2F96	800MA	8	35	102	7-7/8	5-5/8	17

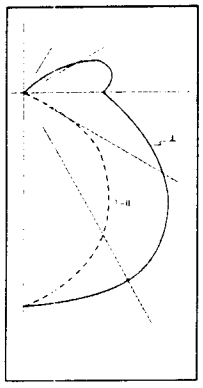
* For detailed Fixture Dimensional Data refer to Channel Diagram number on page 209.

Coefficients of Utilization

pfc	20%																	
pcc	80%				70%				50%			30%			10%			0%
pw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	85	85	85	85	82	82	82	82	77	77	77	73	73	73	68	68	68	66
1	76	71	68	64	73	69	66	63	65	62	60	61	59	57	58	56	54	52
2	68	61	56	51	66	60	55	50	56	52	48	53	49	46	50	47	44	42
3	[illegible]	54	47	42	59	52	46	41	49	44	40	46	42	38	44	40	37	35
4	[illegible]	[illegible]	40	35	54	46	40	35	43	38	34	41	36	33	39	35	31	30
5	[illegible]	[illegible]	35	30	50	41	34	30	39	33	29	37	32	28	35	30	27	25
6	[illegible]	38	31	26	46	37	30	26	35	29	25	33	28	24	31	27	24	22
7	44	34	27	23	42	33	27	23	31	26	22	30	25	21	28	24	21	19
8	41	31	25	20	40	30	24	20	29	23	20	27	23	19	26	22	19	17
9	38	28	22	18	37	28	22	18	26	21	18	25	21	17	24	20	17	15
10	36	26	20	16	35	25	20	16	24	19	16	23	19	16	22	18	15	14

Candlepower

Angle	Along ∥	45°	Across ⊥
[illegible]	[illegible]	1166	1166
[illegible]	[illegible]	1155	1170
[illegible]	[illegible]	1148	1192
[illegible]	[illegible]	1108	1190
[illegible]	841	984	1104
[illegible]	631	814	957
[illegible]	429	640	781
[illegible]	249	481	616
[illegible]	107	346	497
[illegible]	18	210	350
[illegible]	14	125	220
[illegible]	12	86	161
[illegible]	8	42	79
[illegible]	[illegible]	19	30
[illegible]	[illegible]	8	15
[illegible]	[illegible]	3	7
[illegible]	[illegible]	2	3
[illegible]	[illegible]	1	1
[illegible]	[illegible]	0	0



Energy Saving Ballast. F40T12/CW lamps rated at 3150 lumens. Spacing criterion: (∥) 1.29 x mounting height, (⊥) 1.51 x mounting height

For complete photometric report request VT-240DR report #M-2062.
Efficiency = 72.16%

Typical VCP Percentages

Room Size (Ft.)	Height Along 13.0'	Height Along 16.0'	Height Across 13.0'	Height Across 16.0'
[illegible]	46	52	39	46
[illegible]	41	45	32	37
[illegible]	38	40	26	29
[illegible]	41	45	35	40
[illegible]	37	40	27	30

Zonal Lumen Summary

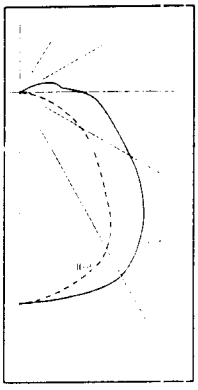
Zone	Lumens	%Lamp	%Fixture
0-30	967	15.34	21.26
0-40	1634	25.93	35.94
0-60	2966	47.08	65.25
0-90	4189	66.49	92.15
90-180	357	5.66	7.85
0-180	4546	72.16	100.00

Coefficients of Utilization

pfc	20%																	
pcc	80%				70%				50%			30%			10%			0%
pw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	85	85	85	85	82	82	82	82	77	77	77	73	73	73	68	68	68	66
1	76	72	69	66	74	70	67	64	66	63	61	62	60	58	59	57	55	53
2	69	63	57	53	66	61	56	52	57	53	50	54	51	48	51	48	46	44
3	63	55	49	44	61	53	48	43	50	46	42	48	44	40	45	42	39	37
4	57	49	42	37	55	47	41	37	45	40	35	42	38	34	40	36	33	31
5	52	43	36	31	50	42	35	31	39	34	30	37	33	29	35	31	28	26
6	48	38	32	27	46	37	31	26	35	30	26	34	29	25	32	28	24	23
7	44	34	28	23	43	33	27	23	32	26	22	30	25	22	29	24	21	20
8	41	31	24	20	39	30	24	20	28	23	19	27	22	19	26	22	18	[illegible]
9	38	27	21	17	36	27	21	17	26	20	17	24	20	16	23	19	16	14
10	35	25	19	15	34	24	19	15	23	18	15	22	17	14	21	17	14	13

Candlepower

Angle	Along ∥	45°	Across ⊥
0	2332	2332	2332
10	2282	2310	2339
20	2200	2295	2384
30	2026	2216	2379
40	1682	1968	2207
50	1261	1627	1914
60	858	1279	1562
70	497	961	1232
80	214	692	993
90	36	420	700
100	28	250	440
110	23	171	322
120	15	84	158
130	10	37	59
140	6	16	30
150	3	6	13
160	2	3	5
170	2	1	2
180	0	0	0



Energy Saving Ballast. F96T12/CW lamps rated at 6300 lumens. Spacing criterion: (∥) 1.29 x mounting height, (⊥) 1.51 x mounting height

For complete photometric report request VT-296 DR report #M-3110
Efficiency = 72.16%

Typical VCP Percentages

Room Size (Ft.)	Height Along 13.0'	Height Along 16.0'	Height Across 13.0'	Height Across 16.0'
40 x 40	29	34	23	28
60 x 60	25	28	18	22
60 x 100	23	25	14	16
100 x 60	25	29	21	24
100 x 100	23	25	15	17

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1933	15.34	21.26
0-40	3267	25.93	35.94
0-60	5933	47.08	65.25
0-90	8378	66.49	92.15
90-180	714	5.66	7.85
0-180	9092	72.16	100.00

Ordering Information Example VT-240 DR

	VT	2	40	DR			LE3	Add desired options to catalog number in the order listed below.		

8T Tandem (Housing)

Ser

Number of Lamps
1 or 2
(Not included)

Wattage (Length)
40-40 W (48") RS
48-39 W (48") SL
96-75 W (96") SL
48-60 W (48") HO
96-110 W (96") HO

DR Internal Prismatic Lens/ 15% DR High Impact Additive (Standard)
DR-100 100% High Impact Additive
LEX High Impact Clear Polycarbonate LEXAN Lens/ Low Brightness Pattern

High Output (HO)
800MA

Voltage
120V or 277V
Consult Factory

LE3 Energy Saving Ballast E
—— Electronic Ballast Available
(Specify Brand and Catalog Number)

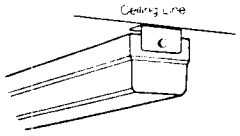
GL Single Element Fusing
GM Double Element Fusing
EL4, EL8 Emergency Lighting (self-contained)
RIF1 Radio Interference Suppressor

VR Vandal Resistant
DH Deep Housing/ 4" Fixture Length
(Used To Complement Housing Depth of 8" Fixture.)

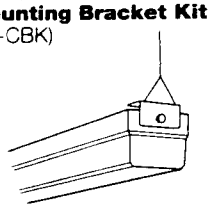
WL Wet Location Labeled

Additional Options and Accessories Available
See Options and Accessory Section Pages 189-191

Optional Mounting Bracket Kit
(VT-MBK)



Optional Chain Mounting Bracket Kit
(VT-CBK)



U.S. ARMY RESERVE
STORM-WATER POLLUTION PREVENTION PLAN
(SWP3)

Kunieda U.S. Army Reserve Center
Ninth Corps Reserves
Hilo, Hawaii

Prepared By:
U.S. Geological Survey
Water Resources
Honolulu, Hawaii
September 2003

CERTIFICATION AND SIGNATURE

"*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*"

Signature: _____

Typed name: _____

Title: _____

Date: _____

Telephone numbers:

Acronyms and Abbreviations	
BMP	**B**est **M**anagement **P**ractice
DPW	**D**irectorate of **P**ublic **W**orks
ECO	**E**nvironmental **C**ompliance **O**fficer
ED	**E**nvironmental **D**epartment
HUMMV	**H**eavy **U**tility **M**obile **M**ultipurpose **V**ehicle
KUSARC	**K**unieda **U**.**S**. **A**rmy **R**eserve **C**enter
NPDES	**N**ational **P**ollution **D**ischarge **E**limination **S**ystem
OWS	**O**il **W**ater **S**eparator
POL	**P**etroleum **O**il and **L**ubricants
PPT	**P**ollution **P**revention **T**eam
SSP	**S**hop **S**torage **P**oint
SWPCT	**S**torm-**W**ater **P**ollution **C**ontrol **T**eam
SWPPP (SWP3)	**S**torm-**W**ater **P**ollution **P**revention **P**lan
USGS	**U.S. G**eological **S**urvey

STORM-WATER POLLUTION PREVENTION PLAN – KUSARC

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1.0 INTRODUCTION

The Clean Water Act of 1987 (40 Code of Federal Regulations 122) requires Federal installations that discharge storm-water, whose quality may be affected by industrial activities to implement plans to control the quality of storm-water discharges. This "Storm-Water Pollution Prevention Plan" (SWPPP) was developed in response to these requirements. The plan identifies sources of potential pollution, describes "Best Management Practices" (BMPs) designed to minimize pollution through prevention and source control, and recommends action for this facility. The SWPPP also discusses storm-water runoff drainage, identifies point-source outfalls into local surface waters, and provides non-storm-water discharge certification of storm-water outfalls.

1.1 FACILITY PERMIT

The State of Hawaii, in which the Kunieda U.S. Army Reserve Center (KUSARC) facility is located, has National Pollution Discharge Elimination System (NPDES) permitting authority. Storm water permitting in the State is handled by the State Department of Health, Clean Water Branch. The permit applied for through the Clean Water Branch is a Notice of General Permit Coverage, file number HI R80A455. The Clean Water Branch representative for this permit is Joanne Seto, at (808) 586-4309.

1.2 GENERAL SITE DESCRIPTION

KUSARC is located on the east side of the island of Hawaii, in the town of Hilo, approximately 1.3 miles south of Hilo Bay (Figure 1.2). The facility covers a land area of 3.55 acres and is approximately 100 feet above mean sea level. Most of the storm-water runoff at KUSARC is collected by swales and channels and directed towards Waiakea Stream to the north. For large storms, a 48-inch storm drainpipe is located near the Assembly Building (Figure 3.1).

1.3 PLAN DEVELOPMENT

The U.S. Geological Survey (USGS), Water Resources, drafted this plan. Information and illustrations were developed from site inspections and from the Kunieda U.S. Army Reserve Center Ninth Corps Reserves and USGS databases.

1.4 PLAN REVISION

This SWPPP should be updated annually or more often if required. Most of the information in this plan is presented as maps, illustrations, and checklists. These elements describe where storm-water pollution is likely to occur and Best Management Practices that may be used to prevent and control storm-water pollution. In order to help facilitate the updating of this plan and those like it, detailed notes, sketches, and reports should be made during periodic storm-water inspections and storm events.

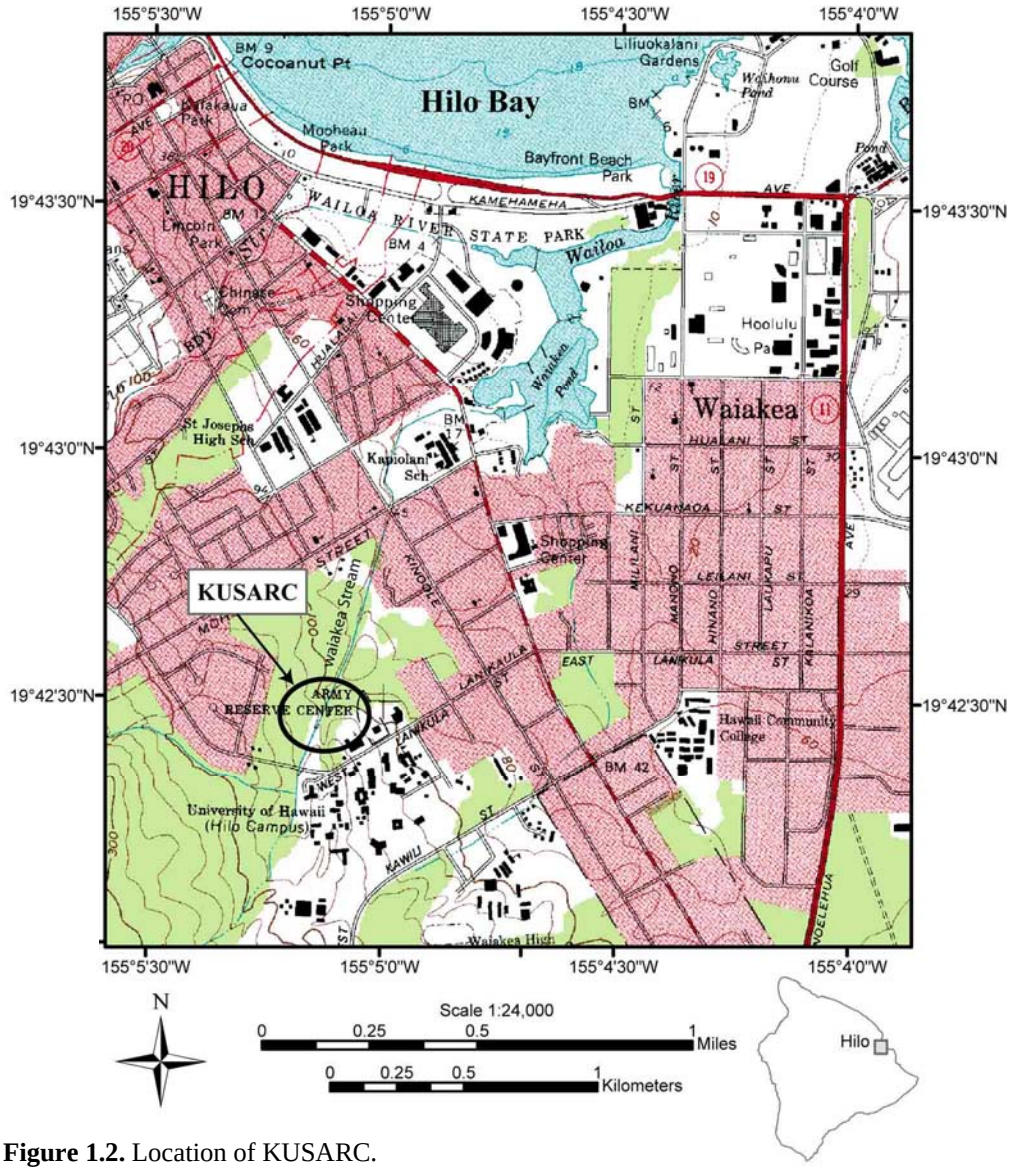

Figure 1.2. Location of KUSARC.

2.0 POLLUTION PREVENTION TEAM

The Pollution Prevention Team (PPT) is responsible for implementing and evaluating the effectiveness of the SWPPP at this facility. Personnel should be officially appointed to the team. Table 2.0 lists the members of the PPT and shows their respective duties. Additional members may be appointed to the PPT as needed.

Table 2.0 Members of the Pollution Prevention Team.

Team Member	Duties
Wayne Mitsko (808) 438-1600 ext. 3247 Environmental Manager for 9th Regional Support Command	• Reviews and approves SWPPP and any modifications or updates. • Provides guidance and information requested. • Organizes or performs annual site inspection.
Jerry Kipp Primary ECO, KUSARC (808) 935-7543	• Implements SWPPP and any modifications. • Prepares cost estimates for implementation of plans and BMPs. • Reviews quarterly storm-water inspection checklist. • Informs Wayne Mitsko of problems and equipment and training needs. • Serves as emergency spill response coordinator for the facility.
Wade Mano Alternate ECO, KUSARC (808) 935-8653	• Assists Primary ECO with implementation of SWPPP at the facility. • Serves as backup emergency spill response coordinator of the facility. • Conducts quarterly storm-water inspections and files inspection reports. • Ensures personnel implement good housekeeping, preventative maintenance, and spill prevention practices at motor pool and maintenance areas.

3.0 ASSESSMENT

3.1 SITE AND DRAINAGE MAPS

NPDES regulations require that a facility site map be developed as part of the SWPPP. Required elements of the map include locations of industrial activity, storm-water structures, and the direction of storm-water runoff. Figure 3.1 shows the location of buildings and areas of industrial activity at KUSARC and documents the runoff direction and storm-water structures at this facility.

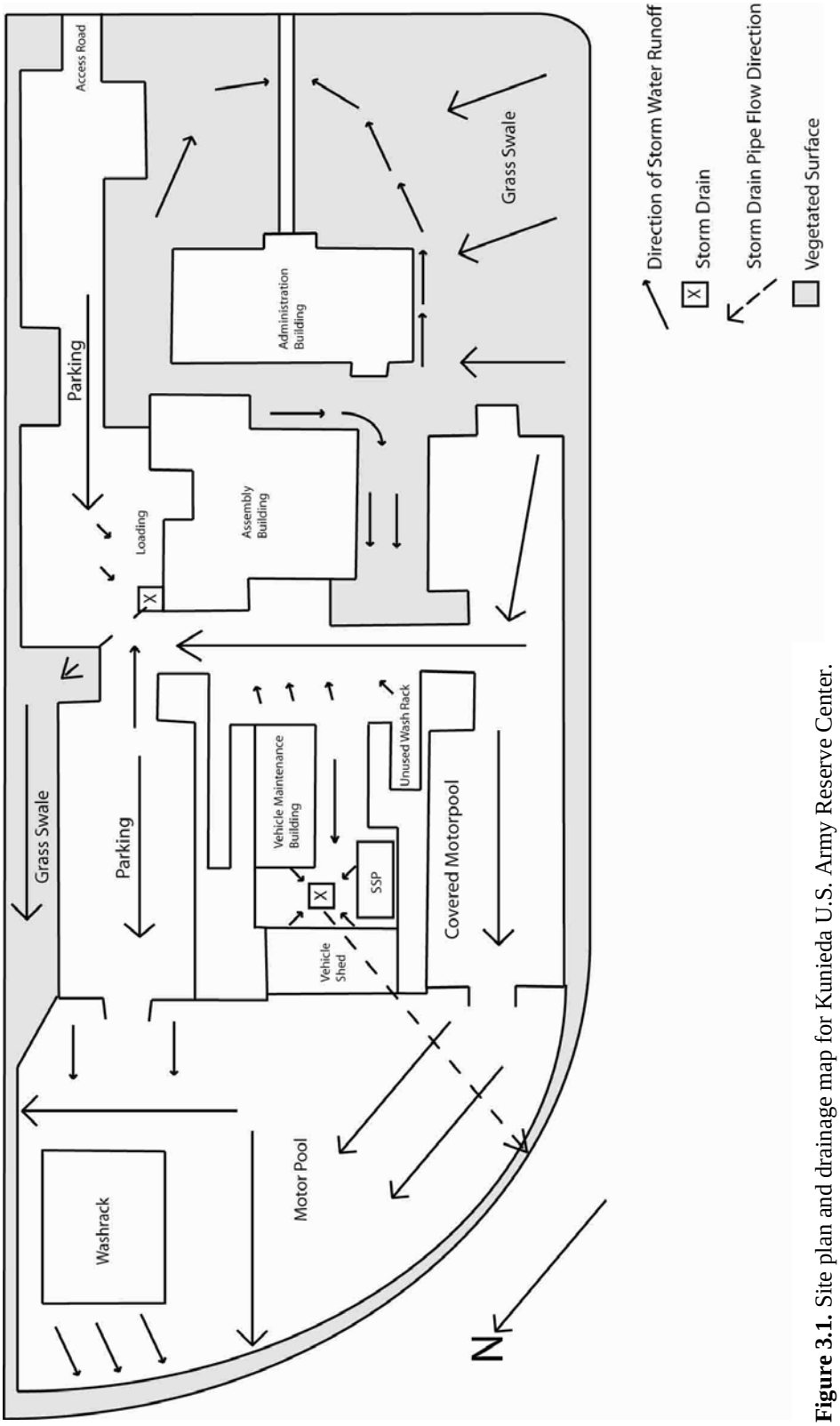

Figure 3.1. Site plan and drainage map for Kunieda U.S. Army Reserve Center.

3.2 SIGNIFICANT MATERIALS STORAGE

The National Pollutant Discharge Elimination System permit requires an inventory of all significant materials stored at KUSARC that could contribute to storm-water pollution. These materials include, but are not limited to, raw products, fuels, manufactured goods, detergents, paints, solvents, fertilizers, plastic pellets, pesticides, finished materials, and waste products. Significant materials currently being stored at KUSARC include:

Motor oil
Used oil
Diesel fuel
Rust protectant
Spray paint
Spot paint
General lubricant
Acetylene
Wheel-bearing grease
Simple Green cleaning solvent
Batteries

3.3 STORAGE AND HANDLING PROCEDURES

Proper storage and handling procedures are essential in implementing a Storm-Water Pollution Prevention Plan. Storage methods pertain to the manner in which materials are stored both inside and outside the facility buildings. Proper operator handling and transportation methods also play critical roles in the SWPPP implementation.

The KUSARC facility has an enclosed vehicle maintenance building with one maintenance bay where all mechanical work is conducted. Activities in the vehicle maintenance building are carried out by U.S. Army personnel who perform maintenance on vehicles and equipment that involves mechanical, hydraulic, and lubrication operations. Maintenance work inside this building is not exposed to storm-water. A Shop Storage Point (SSP), vehicle shed, washrack, and motorpool are also located at the KUSARC facility.

Material storage and handling procedures at KUSARC:

- The vehicle maintenance building is constructed of metal on a concrete foundation (Appendix C, Photograph 1). It contains one maintenance bay that is curbed to prevent runoff and contain any spills inside the shop and bay.
- The vehicle maintenance building is used for vehicle and equipment maintenance and repair. Activities include changing oil, grease, hydraulic fluid, brake fluid, and antifreeze. Tires, brakes, air filters, and batteries are also replaced as needed.
- Inside the vehicle maintenance building, tools, materials, and supplies are elevated off the concrete floor on metal shelves. A generator and wheel-bearing grease bucket are also elevated off the floor on pallets.
- The vehicle maintenance building also houses a secondary storage area that is separated from the maintenance bay by green metal fencing. This area stores cylinders of oxygen, hydraulic

jacks, brooms, parts, and tools. The secondary storage area also houses a red storage drum for used rags and an office storage cabinet containing office supplies and AA batteries.

- Parts and tools are cleaned with solvents in a self-contained cleaning station next to the maintenance bay. Solvents are reused and a recycling program involving an outside contractor is in effect to dispose of and clean used solvent. Minor painting of vehicles is also done here.
- First aid kits, fire extinguishers, and spill control kits are all located in the vehicle maintenance building near the maintenance bay.
- A battery storage room (Appendix C, Photograph 2) is attached to the vehicle maintenance building and has a fully enclosed concrete floor. All batteries are elevated on pallets. The door jam is used as the containment curb. Warning signs are clearly posted. No spill mats or spill kits are in the battery storage room.
- Used Petroleum Oil and Lubricants (POL) and other potential pollutants are stored in a Shop Storage Point south of the vehicle maintenance building. The SSP is a covered concrete area approximately 25 x 8 x 3.5 feet. Cinder block walls enclose the SSP on 3 sides. The SSP is left open on the fourth, north-facing side, and no containment curb has been constructed (Appendix C, Photograph 3). The site was clean and orderly at the time of inspection. Spill response equipment is on site, as well as a dry sweep and a broom. Containers and drums are placed on secondary containment storage systems or pallets. Contact numbers for primary and alternate Environmental Compliance Officers (ECO) are clearly posted.
- A Fire extinguisher is available and clearly marked in the SSP.
- A large walk in freezer has been converted to a secondary SSP for flammable items (Appendix C, Photograph 4). The secondary SSP, located next to the primary SSP, is fully enclosed and has an automated fire extinguisher system. The floor of the secondary SSP is an elevated grate, with spill response materials underneath to contain and absorb spills.
- All drums and containers are sealed, labeled, dated, and on pallets or secondary containment systems.
- Nine 55 gallon drums of diesel fuel, twelve 5 gallon buckets of lubricant, eleven 5 gallon buckets of oil, and several 55 gallon drums of rust protectant are stored in the secondary SSP. Two cabinets of spot and spray paint are also in the secondary SSP.
- Drums of used POL are picked up as needed and taken to the oil recycling company UNICAL.
- A vehicle shed with overhead hoists is located next to the primary SSP. This bay is constructed of aluminum siding and roofing that covers a concrete foundation. Miscellaneous parts and materials stored in the shed are on pallets and shelves. All items were elevated off the ground at the time of inspection. An oil absorption and spill kit is located within 40 feet of the vehicle shed at the SSP.
- Contents of the bay include 24 tires, one cylinder of oxygen, one cylinder of acetylene, one hydraulic jack, a compressor, and miscellaneous vehicle parts.
- The storm drain for this area, including the SSP and vehicle shed, is located between these buildings (Figure 3.1).
- The onsite washrack is located in the northern end of the facility. The washrack is a covered, elevated, and slanted concrete platform with no containment curb (Appendix C, Photograph

5). Water from the washrack flows into a drain, where it is recycled through a series of filters, absorbers, charcoal, and polishers. The recycled water then goes into a storage container for reuse.

- Two storage bins, also on an elevated and slanted concrete slab, are next to the washrack. These bins are bordered on 3 sides by a containment curb, with the fourth side slanted towards the washrack recycling drains.
- The washrack was broken at the time of inspection, so vehicles are either not washed or are washed at the National Guard station off site.
- A covered motorpool and material storage area, constructed of aluminum siding and roofing, is located on the southwest border of the facility. This area is used to store miscellaneous parts (on pallets) and to park Heavy Utility Mobile Multipurpose Vehicles (HUMMVs) (Appendix C, Photograph 6).

3.4 SPILL PREVENTION AND CONTROL

Spills and leaks are a major contributor to contaminated storm-water discharge. The following preventive actions are currently implemented and practiced at KUSARC:

- All covered parking areas, vehicle maintenance buildings, and SSPs have at least one spill kit for the clean up of any spills.
- All drums and containers containing POL and solvents are placed in secondary spill containers.
- Solvents for cleaning individual parts are used only in contained wash stations within the vehicle maintenance building. All outdoor cleaning is done with Simple Green or other biodegradable detergents approved by the U.S. Environmental Protection Agency.
- All vehicles are parked on paved surfaces (Appendix C, Photograph 7) and most have drip pans under the engine. Procedures are established to ensure routine inspection and disposal of liquids collected in the drip pans.

3.5 SIGNIFICANT SPILLS AND LEAKS

According to the ECO, there have been no significant spills or leaks within the last 5 years at KUSARC.

3.6 STORM-WATER MONITORING DATA

Storm water monitoring is conducted annually as part of a permit issued by the Department of Health Clean Water Branch (HI R80A455). Grab or composite samples are collected and analyzed for biochemical oxygen demand, chemical oxygen demand, total suspended solids, total phosphorus, total nitrogen, nitrate + nitrite nitrogen, oil and grease, and pH. Flow at the time of sampling is calculated or estimated. Samples are collected at the discharge points of the storm drains located near the Assembly and Vehicle Maintenance Buildings.

4.0 Best Management Practices (BMPs)

Control of storm-water pollution is achieved through the use of BMPs. This SWPPP identifies 30 BMPs that use processes, technology, and operating methods to control or reduce pollution. These BMPs have been developed to promote good environmental practices, reduce the potential contamination of storm-water discharges, and lessen the impact of nonpoint-source pollution.

The 30 BMPs used in this SWPPP are described in detail in Appendix A. Individual BMPs in this section are summaries. Full descriptions of each BMP are in Appendix A. Not all 30 of the BMPs are appropriate for this facility at the present time. However, in the future, updates should take into account all 30 BMPs as the facility changes. A sample, blank BMP checklist is given in Appendix B. This checklist can be used to inspect the facility for conformance with the BMPs and overall compliance with the SWPPP.

4.1 BEST MANAGEMENT PRACTICES CURRENTLY EMPLOYED

This section describes the BMPs that were implemented at the facility during the time of the site visit.

- Facility clean: parts, material, and equipment neatly stored (BMP01).
- Equipment, vehicles, and tools clean (BMP02).
- Proper security measures in effect (BMP03).
- Dry sweep and clean-up materials kept on-site (BMP04).
- Pallets used under parts and materials stored outside (BMP05).
- Vehicles parked on asphalt or concrete (BMP06).
- Drip pans used under almost all vehicles and equipment (BMP07).
- Storm drains cleaned regularly (BMP08).
- Storm water does not flow to industrial or sanitary sewer system (BMP09).
- No industrial drains need sealing (BMP12).
- POL not exposed to storm-water (BMP16).
- POL wastes contained and properly stored (BMP17).
- Drums properly stored (BMP18).
- Solvents used only in centralized cleaning station (BMP20).
- Fuel contained properly (BMP21).
- Facility appropriately graded (BMP24).
- Surface runoff from the site directed to a grassed or vegetated area (BMP25).
- Drainage features of the facility prevent flooding (BMP26).

4.2 ADDITIONAL BMPs TO BE IMPLEMENTED

Additional BMPs that should be implemented:

- Storm drains should be stenciled (BMP13).
- An Oil-Water Separator (OWS) is not needed due to a filtration system at the washrack; however, the filtration system was not operational at the time of inspection. Filtration system should be fixed (BMP14).
- Containment curbs or trench drains needed (BMP19).
- Employee training needs to be modified to implement the SWPPP (BMP27).
- Inspections need to be modified for the implementation of this SWPPP (BMP30).

These current and recommended additional BMPs are summarized in Table 4.3.

Table 4.3. On-site BMP checklist.

BMP Inspection Checklist for SWPPP Refer to Appendix A for a complete description of each BMP. Not all BMP may apply [N/A: Not Applicable].		Facility: KUSARC Date: 1-29-03 Inspector: Nate Adams and Gordon Tribble	
	Description	Status	Notes
BMP01	Facility neat and clean	YES	
	Proper signs displayed	YES	
	Parts properly stored	YES	
	Storage areas clean and safe	YES	
	Containers labeled	YES	
	First-aid kits accessible	YES	
	Trash bins closed	YES	
BMP02	Equipment clean	YES	
	Equipment in good condition	YES	
	Maintenance records current	YES	
	Label equipment needing repair	YES	
BMP03	Fences with locked gates	YES	
	Chemicals in secured areas	YES	
	Fuel pumps locked	N/A	No fueling done at facility
BMP04	Dry sweep present	YES	
	Fuel areas with containment materials	N/A	No fueling done at facility

	Neutralizing compounds for chemicals	N/A	No chemicals stored at facility
BMP05	Materials on pallets if outside	YES	
	Pallets neatly stored	YES	
	Pallets in good repair	YES	
BPM06	Vehicles on impermeable surface	YES	
BMP07	Drip pans below engines	YES	Nearly all
	Check water in pans for oil	YES	All dry
BMP08	Sediment not clogging storm system	YES	
	No oil stains on sediment	YES	
	No chemical odor from storm system	YES	
	No oily water in storm system	YES	
BMP09	Storm water only to storm system	N/A	
BMP10	Oil-water separator present	N/A	OWS not needed with filtration system at washrack
	OWS operates within capacity	N/A	
BMP11	OWS discharges to sanitary sewer	N/A	Filtration system is a closed system
	No non-storm-water discharge	N/A	
BMP12	No industrial drains need sealing	YES	
BMP13	Storm drains stenciled	NO	None stenciled
BMP14	Oil-water separator serviced	N/A	
	Contractor maintenance current	N/A	
	Oil-water separator operational	N/A	
BMP15	Drain not full of debris	N/A	
	Pipes not blocked	N/A	
	Grit chambers/settling basins not full	YES	
BMP16	POL not exposed to storm-water	YES	
BMP17	Waste liquids with secondary containment	YES	
	Containment capacity not exceeded	YES	
	Containment features are in good condition	YES	
BMP18	Drums contained	YES	

BMP19	Trench drains intercept spills	NO	No containment curbs or trench drains
BMP20	Centralize solvents	YES	
BMP21	Fuel containment	YES	
BMP22	Fuel trucks and trailers inspected	N/A	No fueling trucks at facility
	Tanks not leaking	N/A	
	Equipment in good condition	N/A	
BMP23	Fuel trucks empty or contained	N/A	No fueling trucks at facility
BMP24	Graded land surface	YES	
BMP25	Buffer zones vegetated	YES	
BMP26	Swales, storm drains and culverts ok	YES	
BMP27	Employee training current	NO	Employee training needs to be modified
BMP28	Spills cleaned and reported	N/A	
BMP29	Materials Inventory	N/A	
BMP30	Inspection	NO	Inspection not yet performed

5.0 Appendix A - Best Management Practices (BMPs)

Description of BMP and Required Actions

BMP01 Facility clean and in good repair: Inside and outside areas of industrial facilities should be kept neat and clean. This includes a regular sweeping program, proper signs displayed, and having parts, material, and equipment neatly and properly stored in areas that are clean, well-marked, and with safe access. Labels should be properly and clearly placed on drums and other containers. First-aid kits should be easily accessible in all maintenance areas, with warning signs for hazardous and flammable materials. Trash bins should be closed when not in use and there should be no excess rubbish or debris in the work areas. Facility buildings, paving, and outdoor sites such as wash racks, fueling stations, and storage sheds should be maintained in good operational condition with regular cleaning to prevent the accumulation of trash, scrap material, and debris. Neat work areas reduce pollution by reducing spills, improving work habits and reducing sloppy material handling, and reducing storm-water exposure to potential contaminants. A weekly inspection by the ECO should verify that the facility is clean and that good housekeeping practices are in effect.

BMP02 Equipment clean: Equipment and vehicles should be kept clean and in good operational condition. Regular cleaning maintains a neat appearance and is needed to inspect for

leaks and drips. Maintenance records of vehicles and equipment should be kept up to date by facility personnel. Vehicles and equipment that are not operational or in need of repair should be labeled with the work needed to fix the problem and the expected date of completion. A weekly inspection by the ECO should be conducted to verify that equipment is clean and that good housekeeping practices are in effect.

BMP03 Security: Facilities should have proper security features to prevent unauthorized access and use of equipment and material. Security features include fences with locked gates, industrial chemicals stored in secured areas, and locks on fuel pumps when not in use. A weekly inspection by the ECO should be conducted to verify that security measures prevent unauthorized access and use of equipment and material.

BMP04 Dry sweep kept on-site: Dry sweep, along with brooms and receptacles, should be placed in clearly marked locations at the facility. Areas where POL or other liquids are stored or disbursed should have appropriate spill-response materials nearby. Areas handling large amounts of fuel should have spill-containment materials such as absorbent pads and booms in well-marked and easily-accessible locations. Areas used to store caustic chemicals should have appropriate neutralizing compounds and containment materials. For example, shops handling battery acid should have sufficient amounts of sodium bicarbonate (baking soda) to neutralize spilled acid. A weekly inspection by the ECO should verify that dry sweep and other appropriate clean-up materials are present.

BMP05 Materials on pallets: Materials such as parts, supplies, and scrap metal and wood should be stored on pallets if kept outside to minimize exposure to storm-water runoff. The pallets should be neatly stored and placed in areas that will not contribute to vehicle accidents or constitute a tripping hazard. The pallets should be in good repair so that the materials can be moved by forklift. A weekly inspection by the ECO should be conducted to insure that outdoor materials are properly stored and good housekeeping practices are in effect.

BPM06 Vehicle parking: Vehicles should be parked on an impermeable surface. This will prevent spills and drips from infiltrating into the ground and facilitate the clean-up of spills. Parking on a paved surface also helps keep vehicles clean and reduces vehicle maintenance caused by the accumulation of dirt on the chassis, brakes, suspension, and other vehicular components. A weekly inspection by the ECO should be conducted to insure that vehicles are parked in appropriate locations.

BMP07 Oil pans used on vehicles: Drip pans should be placed below engines and other potential areas of leakage on vehicles and equipment that are parked or stored outside and exposed to storm-water. Water in drip pans should be visually inspected for oil or other contaminants. Dirty pans should either be cleaned with a rag or drained into a system connected to an oil-water separator if necessary. A weekly inspection by the ECO should

be conducted to ensure that drip pans are being used and kept clean. Drip pans should also be inspected after heavy rains.

BMP08 Storm drains cleaned regularly: Regular and proper cleaning of storm drains and other storm-water conveyance features is needed to insure efficient discharge of storm-water. Drains should be inspected monthly by the ECO to see if sediment is clogging the storm-water system. The inspection should also check for possible contaminants in the storm-water system such as oil stains on sediment, an odor of fuel or other chemicals coming from the storm-water system, or a discoloration of water or oily sheen on water within the storm-water system.

BMP09 Storm water only to storm system: Storm water outside of contained process areas such as wash racks, maintenance platforms, and fueling areas should not flow to oil-water separators or enter the sanitary sewer system. Storm water discharges to the sanitary-sewer system have the potential to exceed the designed capacity of the system and can cause back-ups and bypasses that result in the release of untreated or incompletely treated effluent. Monthly visual inspections by the ECO should verify that, as far as can be determined and except for designated areas, storm-water will only flow to the storm-water system and not enter the sanitary-sewer system.

BMP10 Oil-water separators treat industrial wastewater: OWS should be constructed to intercept and treat water that may be contaminated by POL and other contaminants from industrial practices. Typical uses are in wash racks, outdoor maintenance areas, fueling and fuel-vehicle parking areas, and drainage from areas with containment curbs. The OWS should have a capacity to handle the amount of water generated during operational use plus storm-water that falls on the operational area. The oil-water separator should also have a capacity sufficient to handle the sediment and oil present in the industrial wastewater. An initial evaluation by the Directorate of Public Works (DPW) and the ECO should verify that the design of the OWS is appropriate for the operation of the facility. Following the evaluation, a weekly inspection by the ECO should verify that activities carried out in areas serviced by oil-water separators have not changed to exceed the capacity of the treatment system.

BMP11 Industrial wastewater discharges to sanitary sewer: Discharge of non-storm-water to storm-water conveyance features is prohibited. Water leaving industrial drains such as an oil-water separator may have residual or dissolved contaminants, and should be discharged to a sanitary sewer system for treatment at a wastewater treatment plant. Swales, inlets, and grated manholes in the storm-water system in and adjacent to the facility should be inspected monthly by the ECO during a period of dry weather. The inspection should visually check for non-storm-water discharges from the facility into the storm-water system. If water is observed entering into or flowing through the storm-water system during a period of dry weather, the ECO should attempt to locate the source of the input and notify the Storm-Water Pollution Control Team (SWPCT) at DPW.

BMP12 Seal critical drains: Drains that convey water and pollutants from areas subject to contamination to the storm-water system should be permanently sealed. Alternatively, drains could be connected to a treatment system such as an oil-water separator or a containment basin. Monthly inspections by the ECO should verify that drains in industrial process areas do not discharge to the storm-water system. Drains that convey industrial wastewater to the storm-water system should be referred to the SWPCT at DPW for evaluation and sealing.

BMP13 Stencil storm drains: Inlets to the storm-water system should have signs stenciled or posted nearby stating that the storm-water inlets lead to the ocean, and that trash and contaminants introduced to the storm-water system contribute to pollution. This could reduce the inadvertent introduction of storm-water contaminants by individuals who are either careless or are not following established procedures. Clearly labeled inlets to the storm-water system provide a relatively inexpensive way to increase public awareness of possible avenues of contamination and nonpoint-source pollution. Overall environmental awareness can also be increased by having the labeling done by individual units or community groups. Weekly inspections by the ECO should verify that the labels to the storm-water inlets are clearly visible.

BMP14 Oil-water separator serviced regularly: Proper and regular maintenance of oil-water separators is essential for correct operation and pollution control. Regular maintenance includes associated settling basins, storm-water splitter boxes, and grit chambers. The ECO shall verify that oil-water separators and other facilities to treat industrial wastewater are cleaned and inspected according to maintenance contracts administered by DPW. Where appropriate, weekly inspections by the ECO shall verify proper operation of industrial-water treatment facilities. If necessary, the ECO shall contact DPW to arrange for cleaning or repair of industrial wastewater treatment facilities.

BMP15 Clean trench drains: Trench drains, settling basins, storm-water splitter boxes, grit chambers, catch basins and associated drains are needed to properly convey industrial wastewater to treatment facilities. Where appropriate, weekly inspections by the ECO shall check for debris in trench and floor drains, verify that pipes are not blocked, and note the amount of sediment in grit chambers and settling basins. If necessary, the ECO shall contact DPW to arrange for cleaning or repair of industrial wastewater treatment facilities.

BMP16 POL and other significant liquid materials are not exposed to storm-water: POL supplies and other significant liquids such as solvents, paints, and pesticides must be stored in a facility that prevents exposure to rain and surface runoff. Significant liquids stored in exposed areas or unenclosed facilities can contaminate rain or storm-water run-off and contribute to storm-water pollution. Weekly inspections by the ECO shall verify that POL and other significant liquid materials are not stored in areas or containers exposed to storm-water.

BMP17 Waste POL and other significant materials stored with containment: Waste and used POL should be stored in an area with secondary containment curbs or sumps to prevent spills from leaving the site. Other liquid wastes, such as solvents, paints, and pesticides, also should be stored in a contained area. The curbs should have a containment capacity greater than the volume of waste and used materials stored inside the structure. Weekly inspections by the ECO shall verify that the containment features are in good condition and that the volume of liquids stored in the area is less than the volume of the containment features.

BMP18 Drums contained: Drums with a capacity of 15 gallons or greater should be stored inside areas having permanent containment features to prevent contamination of storm-water and soil in event of a spill. Containment features include curbs, trench drains, sumps, and false floors. Drums may also be stored inside movable overpack containers or on containment pallets. Empty drums do not need to be stored in contained areas. Weekly inspections by the ECO shall verify that all drums with liquid contents are stored with proper containment.

BMP19 Trench drains intercept spills: Trench drains should be positioned to intercept or control spills in industrial work areas where significant liquids are used. The drains should prevent materials from leaving the work areas or coming into contact with storm-water. Containment curbs or central floor drains may be used in place of trench drains if they are properly positioned and constructed. Structures to intercept spills are not needed if only small quantities of liquids are in use, and spills can be managed with spill-response materials on site. Weekly inspections by the ECO shall verify that work involving the handling, disbursement, or transfer of significant liquids is done only in areas with containment features or that material spills in areas without containment features can be quickly controlled with spill-response equipment on site.

BMP20 Centralize solvents: Chlorinated liquid solvents for cleaning parts and washing tools should be used only in designated and centralized locations. Solvents should be used in contained areas or enclosed and secured parts-cleaning stations. Solvents should also be used only when necessary. Where practical, biodegradable solvents and cleaners should be used in place of chlorinated solvents. Weekly inspections by the ECO will verify that chlorinated solvents are not used outside of contained stations. The ECO shall also promote the use of biodegradable cleaners where practical.

BMP21 Fuel containment: Areas used for fuel transfer should have containment curbs or drains leading to oil-water separators to prevent spilled materials from leaving the site and reaching the storm-water system or infiltrating the ground and contaminating ground water. Alternatively, spill-response materials may be placed at readily accessible locations in fueling areas so that spills can be immediately cleaned. Weekly inspections by the ECO will verify that fuel transfer is done only in locations equipped with containment features or having spill-response materials readily accessible.

BMP22 Fuel trucks and trailers inspected: Fuel-hauling trucks and portable fuel tanks should be inspected at least weekly by the ECO to insure proper function and to check for leaks. The inspection should also verify that valves, hoses, and other equipment used in fuel transfer are in good condition and do not leak. Faulty equipment should be repaired or replaced.

BMP23 Fuel trucks empty or contained: Fuel-hauling trucks and portable POL tanks should be stored empty or in areas with containment curbs or trench drains to intercept spills. Leaks and spills from fuel-hauling trucks and portable tanks can release large amounts of contamination and pollute storm-water. Weekly inspection by the ECO shall verify that fuel-hauling trucks and portable tanks are either stored empty or in areas with spill-containment features.

BMP24 Graded land surface: Land surfaces should be graded to convey storm-water away from sites of industrial activity and toward storm-water conveyance features. Pollution of storm-water is reduced by preventing storm-water runoff from flowing over areas where industrial activities are carried out. Properly graded land surfaces can reduce the exposure of storm-water to industrial process area and thereby reduce contamination. The ECO shall observe storm-water runoff patterns during periods of heavy rainfall and report areas with poor grading to the SWPCT at DPW.

BMP25 Buffer zones vegetated: Buffer zones around sites of industrial activity should be vegetated or similarly covered to retard erosion, trap sediment, and lessen the impact of storm-water run-off. Excessive sediment in storm-water degrades water quality and represents a major component of non-point source pollution. The ECO shall inspect the perimeter of the facility or sites of industrial activity monthly. Recommendations to retard erosion, trap sediment, and lessen the impact of storm-water run-off shall be reported to the SWPCT at DPW.

BMP26 Swales, storm drains and culverts: Storm water-drainage features should be designed to efficiently convey storm-water away from industrial facilities. Pollution of storm-water is reduced by preventing storm-water runoff from ponding in areas where industrial activities are carried out. Properly constructed and maintained drainage features can reduce the exposure of storm-water to industrial process area and thereby reduce contamination. The ECO shall observe storm-water runoff patterns during periods of heavy rainfall and report any drainage problems to the SWPCT at DPW. Regular inspections, cleaning, and maintenance may be needed to insure proper function of the storm-water system.

BMP27 Employee training: A regular employee training program is necessary so that all individuals understand the rationale for environmental regulations and procedures required for compliance. The training program for ECO should be modified to include a section on the environmental effects and regulatory requirements associated with the

discharge of storm-water from areas of industrial activity. The SWPCT at DPW shall be responsible for developing course materials as part of the ECO training. The material should include basic hydrologic principals, cover the types and sources of non-point source pollution, and describe the BMP included in this report. Once trained, the ECO shall be responsible for weekly and monthly inspections to insure compliance with the BMP identified herein. The ECO shall report problems to the SWPCT at DPW. The ECO shall distribute relevant sections of this plan to all personnel involved with industrial activities. The ECO shall also be encouraged to promote environmental awareness and regulations within sites of industrial activity.

BMP28 Spills cleaned: The ECO shall be familiar with the Oil and Hazardous Substance Spill Prevention and Response Plan. Minor spills are cleaned by the organization that caused the spill or the organization with operational control where the spill occurred. Major spills and other environmental problems should be reported by the ECO to the Installation Spill Response Team and the SWPCT, DPW. Records of major spills are maintained by ED, DPW.

BMP29 Materials Inventory: An inventory of POL, hazardous-materials, and other significant liquids that could contribute to storm-water pollution should be kept by the ECO or other designated personnel at the facility. This inventory should note the type of material, the quantity on site, and storage location. The inventory should be updated monthly.

BMP30 Inspections: The ECO should conduct weekly inspections to verify compliance with this SWPPP and report any problems. A sample form that can be used for inspections is presented in Appendix A following the description of individual BMP. Inspection records should be sent to the SWPCT at DPW and maintained for one year. The ED, DPW should inspect each site of industrial activity at least quarterly for proper storage and handling of hazardous materials and waste.

6.0 Appendix B - Best Management Practices Inspection Checklist

BMP Inspection Checklist for SWPPP Refer to Appendix A for a complete description of each BMP. Not all BMP may apply.		Facility: Date: Inspector:	
	Description	Status	Notes
BMP01	Facility neat and clean		
	Proper signs displayed		
	Parts properly stored		
	Storage areas clean and safe		
	Containers labeled		
	First-aid kits accessible		
	Trash bins closed		
BMP02	Equipment clean		
	Equipment in good condition		
	Maintenance records current		
	Label equipment needing repair		
BMP03	Fences with locked gates		
	Chemicals in secured areas		
	Fuel pumps locked		
BMP04	Dry sweep present		
	Fuel areas with containment materials		
	Neutralizing compounds for chemicals		
BMP05	Materials on pallets if outside		
	Pallets neatly stored		
	Pallets in good repair		
BPM06	Vehicles on impermeable surface		
BMP07	Drip pans below engines		
	Check water in pans for oil		
BMP08	Sediment not clogging storm system		
	No oil stains on sediment		
	No chemical odor from storm system		
	No oily water in storm system		

BMP09	Storm water only to storm system		
BMP10	Oil-water separator present		
	OWS operates within capacity		
BMP11	OWS discharges to sanitary sewer		
	No non-storm-water discharge		
BMP12	No industrial drains need sealing		
BMP13	Storm drains stenciled		
BMP14	Oil-water separator serviced		
	Contractor maintenance current		
	Oil-water separator operational		
BMP15	Drain not full of debris		
	Pipes not blocked		
	Grit chambers/settling basins not full		
BMP16	POL not exposed to storm-water		
BMP17	Waste liquids with secondary containment		
	Containment capacity not exceeded		
	Containment features are in good condition		
BMP18	Drums contained		
BMP19	Trench drains intercept spills		
BMP20	Centralize solvents		
BMP21	Fuel containment		
BMP22	Fuel trucks and trailers inspected		
	Tanks not leaking		
	Equipment in good condition		
BMP23	Fuel trucks empty or contained		
BMP24	Graded land surface		
BMP25	Buffer zones vegetated		
BMP26	Swales, storm drains and culverts ok		
BMP27	Employee training current		
BMP28	Spills cleaned and reported		
BMP29	Materials Inventory		
BMP30	Inspection		

7.0 Appendix C – Photographs of the Facility

Photograph 1. Vehicle maintenance building.

Photograph 3. Shop storage point.

Photograph 2. Battery storage area.

Photograph 4. Inside secondary shop storage point.

Photograph 5. Washrack.

Photograph 6. Covered motorpool.

Photograph 7. Motorpool.

PAINT CHIP SAMPLES

HILO, HAWAII

JANUARY '94

LEGEND

LOCATION:

OS - OUTSIDE
RM - ROOM
NW - NORTH WEST

E - EAST
W - WEST
MAINT - MAINTENANCE

S - SOUTH
N - NORTH

SAMPLERS:

FRAN PENA
EDGAR VIDA

LONNIE FELISE
ROLAND CRISOSTOMO

BONNIE CHADWELL
JOHN ENOS

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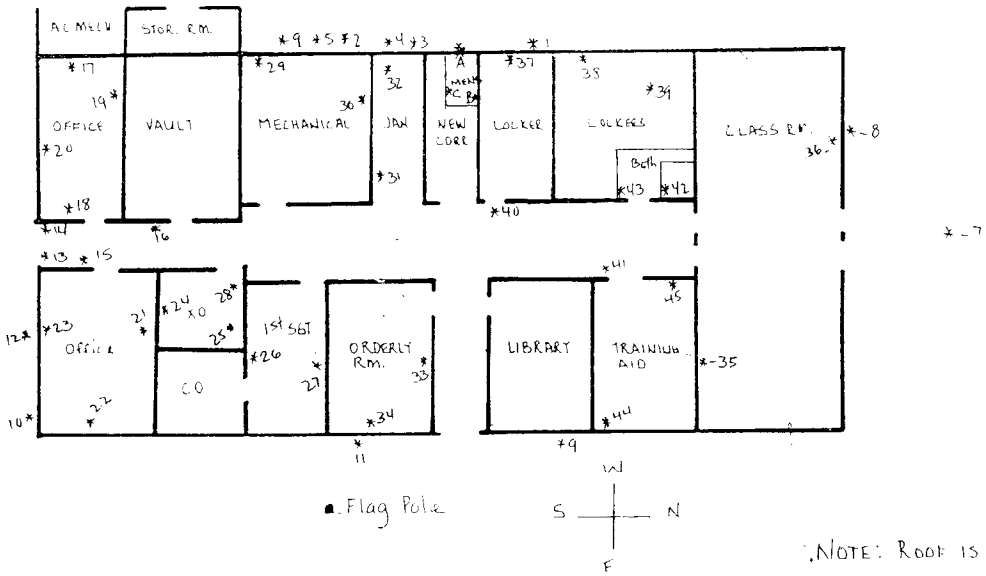
HILO, HAWAII - **BLDG 1** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	1	WALL, OS	1320	94-00417
13 JAN 94	2	PIPE, OS	1322	94-00418
13 JAN 94	3	DOOR, OS	1324	94-00419
13 JAN 94	4	DOOR JAMB, OS	1326	94-00420
13 JAN 94	5	SCREEN, OS	1328	94-00421
13 JAN 94	6	DOOR, OS	1330	94-00422
13 JAN 94	7	RAILING, OS	1340	94-00423
13 JAN 94	8	WALL, OS	1342	94-00424
13 JAN 94	9	WALL, OS	1344	94-00425
13 JAN 94	10	WALL, OS	1346	94-00426
13 JAN 94	11	ALARM, TRIANGLE	1348	94-00427
13 JAN 94	12	WINDOW, OS	1348A	94-00428
13 JAN 94	13	DOOR	1414	94-00429
13 JAN 94	14	DOOR JAMB	1412	94-00430
13 JAN 94	15	WALL	1416	94-00403
13 JAN 94	16	WALL	1420	94-00404
13 JAN 94	17	WALL	1440	94-00405
13 JAN 94	18	WALL	1442	94-00406
13 JAN 94	19	WALL	1444	94-00407
13 JAN 94	20	WINDOW	1446	94-00408
13 JAN 94	21	WALL	1448	94-00409
13 JAN 94	22	WINDOW	1454	94-00410
13 JAN 94	23	WALL	1456	94-00411
13 JAN 94	24	WALL	1514	94-00412
13 JAN 94	25	WALL	1516	94-00413
13 JAN 94	26	WALL	1518	94-00414
13 JAN 94	27	WALL	1520	94-00415
13 JAN 94	28	WALL	1522	94-00416
13 JAN 94	29	WALL	1532	94-00438
13 JAN 94	30	WALL	1534	94-00439
13 JAN 94	31	WALL	1544	94-00440
13 JAN 94	32	WALL	1546	94-00441
13 JAN 94	33	WALL	1550	94-00442
13 JAN 94	34	WALL	1552	94-00443
13 JAN 94	35	WALL	1624	94-00444
13 JAN 94	36	WALL	1628	94-00445
13 JAN 94	37	WALL	1630	94-00446
13 JAN 94	38	WALL	1632	94-00447
13 JAN 94	39	STALL	1634	94-00448
13 JAN 94	40	DOOR	1640	94-00449
13 JAN 94	41	WALL	1642	94-00450
13 JAN 94	42	WALL	1644	94-00451
13 JAN 94	43	WALL	1646	94-00431
13 JAN 94	44	WALL	1650	94-00432
13 JAN 94	45	WALL	1652	94-00433
13 JAN 94	A	WALL	1632	94-00434
13 JAN 94	B	STALL	1637	94-00435
13 JAN 94	C	WALL	1645	94-00436
13 JAN 94	1641	STALL, PARKING, FIRST LINE	1641	94-00437

HILO, HAWAII - BLDG 1
MAP

US ARMY RESERVE CENTER
HILO, HAWAII
INTERIOR SAMPLING: 13 JAN 94
EXTERIOR SAMPLING: 13 JAN 94



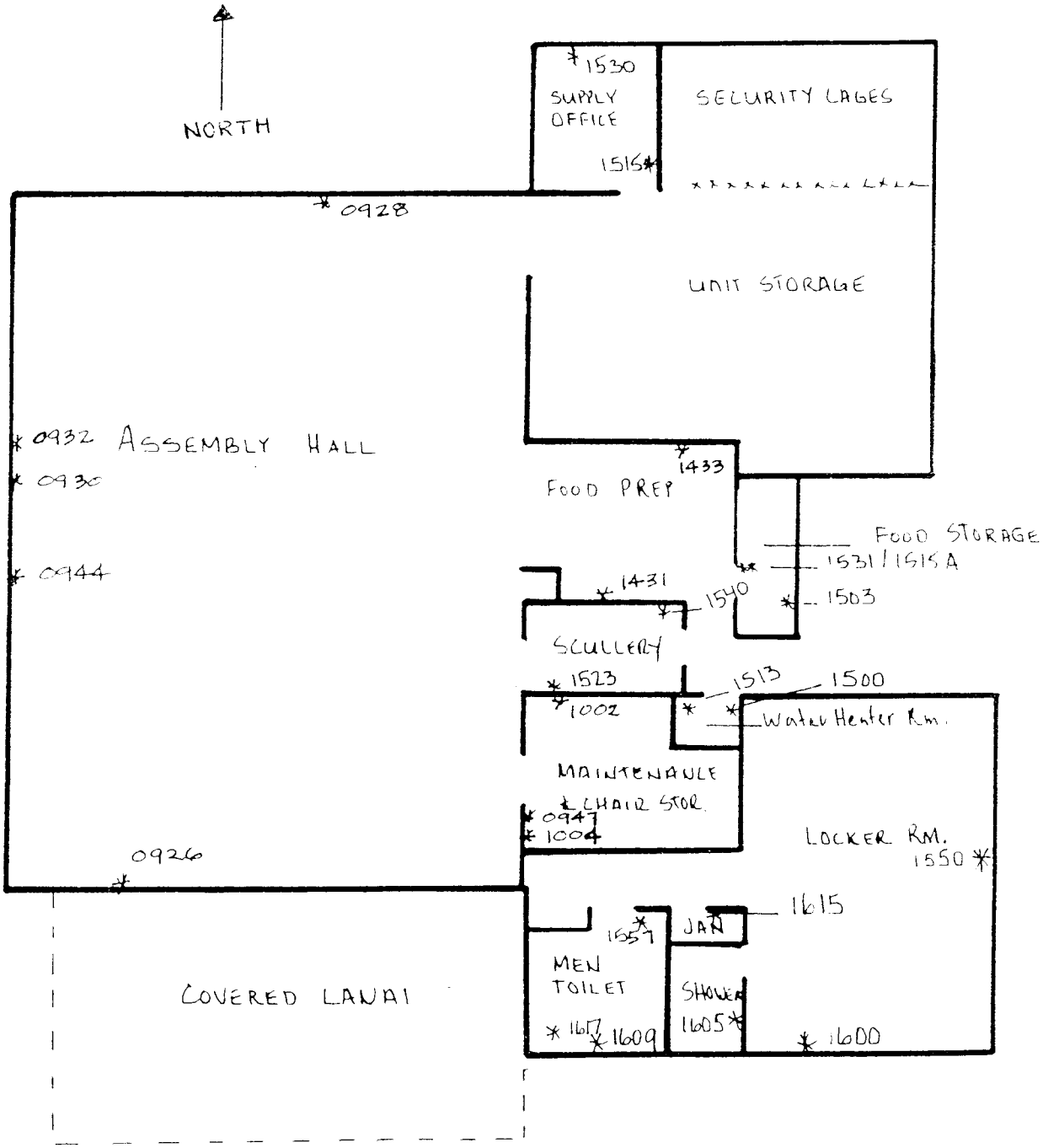
■ Flag Pole

NOTE: ROOF IS P/G.

HILO, HAWAII - **BLDG 2 - INTERIOR** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	1515A	WALL, FOOD STORAGE	1515A	94-00286
13 JAN 94	1515	WALL, SUPPLY OFFICE	1515	94-00287
13 JAN 94	1523	WALL, SCULLERY	1523	94-00288
13 JAN 94	1530	WALL, SUPPLY OFFICE	1530	94-00289
13 JAN 94	1531	DOOR JAMB, FOOD STORAGE	1531	94-00290
13 JAN 94	1540	WALL, SCULLERY	1540	94-00291
13 JAN 94	1550	BEAM, LOCKER RM	1550	94-00292
13 JAN 94	1557	HEAD, LOCKER RM	1557	94-00293
13 JAN 94	1600	WALL, LOCKER RM	1600	94-00294
13 JAN 94	1605	SHOWER, LOCKER RM	1605	94-00295
13 JAN 94	1609	WINDOW, LOCKER RM	1609	94-00296
13 JAN 94	1615	WALL, JANITOR RM	1615	94-00297
13 JAN 94	1617	STALL, LOCKER RM	1617	94-00298
13 JAN 94	0926	WALL, ASSEMBLY HALL	0926	94-00322
13 JAN 94	0928	WALL, ASSEMBLY HALL	0928	94-00323
13 JAN 94	0930	BEAM, STEEL, ASSEMBLY HALL	0930	94-00324
13 JAN 94	0932	WINDOW, ASSEMBLY HALL	0932	94-00325
13 JAN 94	0944	DOOR, ASSEMBLY HALL	0944	94-00326
13 JAN 94	0947	DOOR, FRONT, MAINT RM	0947	94-00327
13 JAN 94	1000	DOOR, MAINT RM	1000	94-00328
13 JAN 94	1002	WALL, MAINT RM	1002	94-00329
13 JAN 94	1004	WALL, MAINT RM	1004	94-00330
13 JAN 94	1431	WALL, FOOD PREP	1431	94-00331
13 JAN 94	1433	WALL, FOOD PREP	1433	94-00332
13 JAN 94	1500	WALL, HEATER RM	1500	94-00333
13 JAN 94	1503	WALL, FOOD STORAGE	1503	94-00334
13 JAN 94	1513	PIPE, HEATER RM	1513	94-00335

HILO, HAWAII - BLDG 2 - INTERIOR MAP

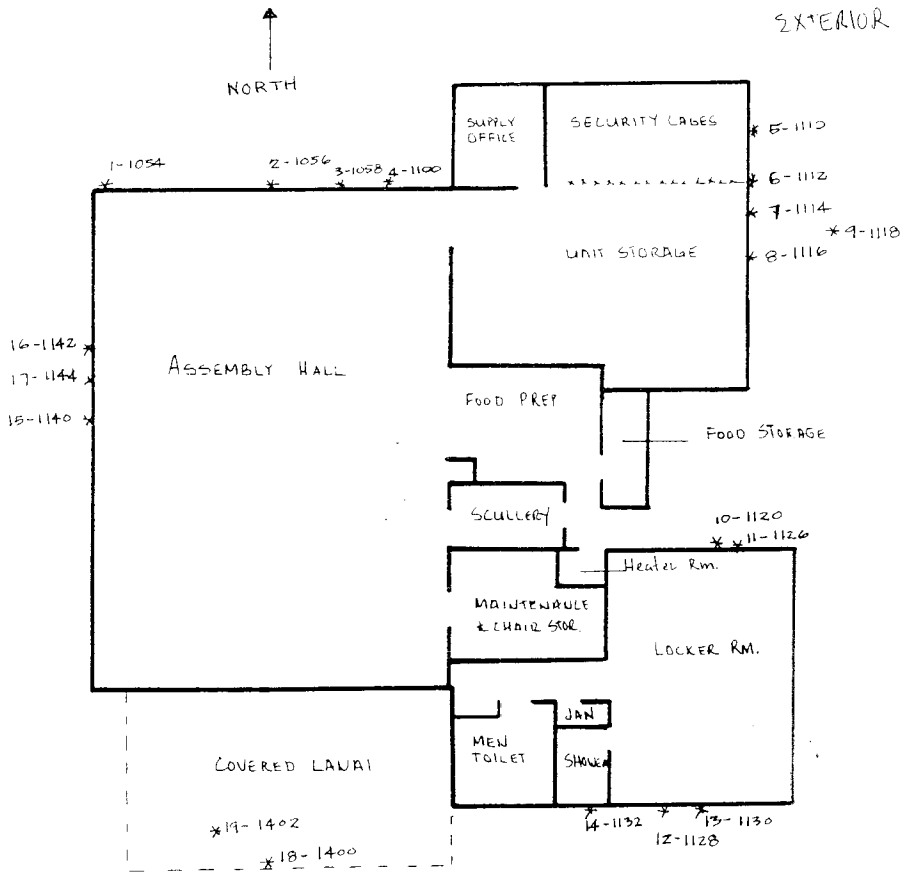


HILO, HAWAII - **BLDG 2 - EXTERIOR** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	1	WALL, W, OS	1054	94-00375
13 JAN 94	2	POLE, PARKING, W, OS	1056	94-00376
13 JAN 94	3	DOOR, W, OS	1058	94-00377
13 JAN 94	4	DOOR JAMB, W, OS	1100	94-00378
13 JAN 94	5	RAILING, N, OS	1110	94-00379
13 JAN 94	6	CAGE, WINDOW, N, OS	1112	94-00380
13 JAN 94	7	WALL, N. OS	1114	94-00381
13 JAN 94	8	DOOR, DOUBLE, N, OS	1116	94-00382
13 JAN 94	9	BEAM, N, OS	1118	94-00383
13 JAN 94	10	DOOR, NW, OS	1120	94-00384
13 JAN 94	11	DOOR JAMB, NW, OS	1126	94-00385
13 JAN 94	12	DOOR, E, OS	1128	94-00386
13 JAN 94	13	DOOR JAMB, E, OS	1130	94-00387
13 JAN 94	14	WALL, E, OS	1132	94-00299
13 JAN 94	15	WALL, S, OS	1140	94-00300
13 JAN 94	16	DOOR, S, OS	1142	94-00301
13 JAN 94	17	DOOR JAMB, S, OS	1144	94-00302
13 JAN 94	18	RAILING, E, OS	1400	94-00303
13 JAN 94	19	POST, E, LANAI	1402	94-00304

HILO, HAWAII - BLDG 2 - EXTERIOR
MAP

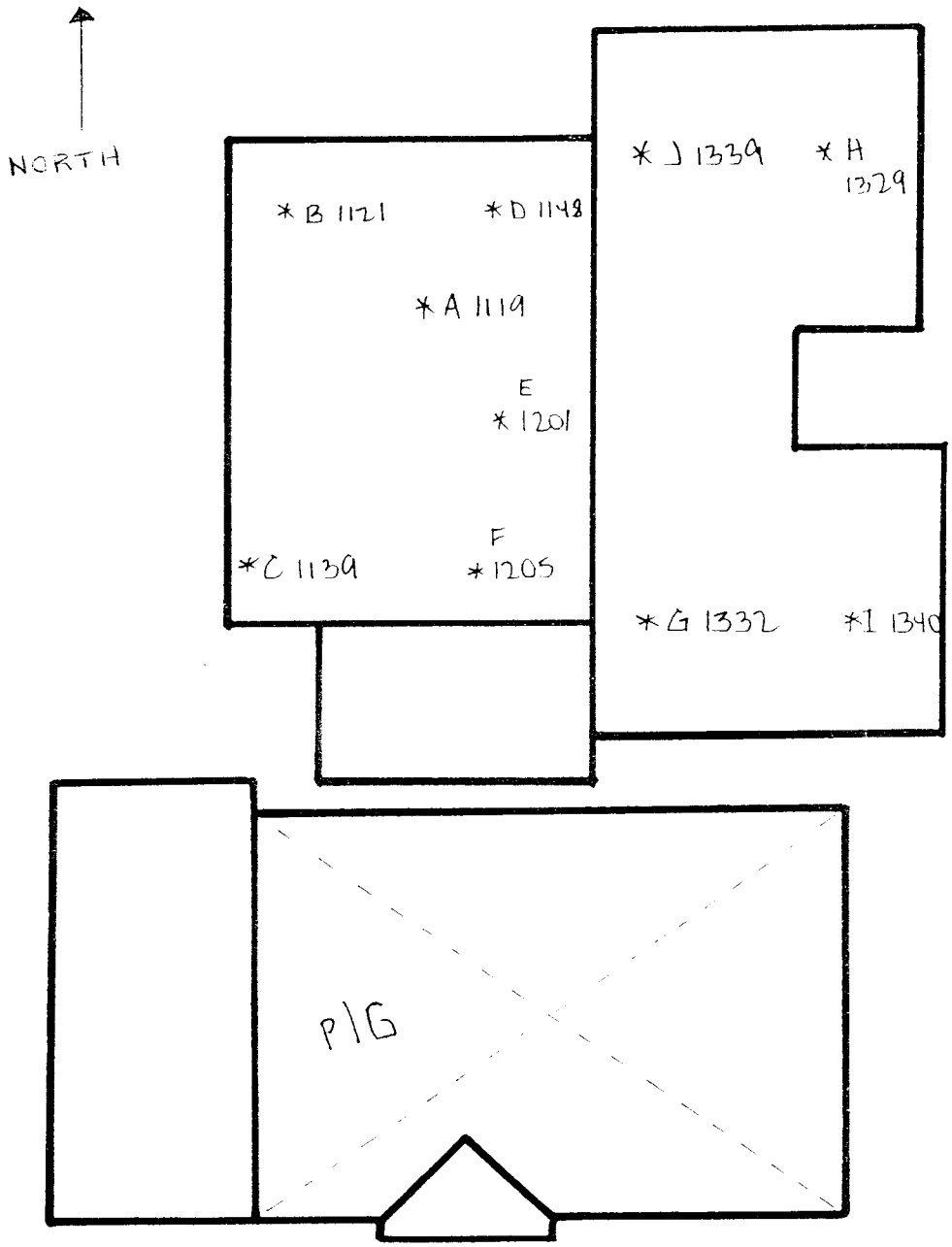
US ARMY RESERVE CENTER
HILO, HAWAII
EXTERIOR SAMPLING: 13 JAN 94



HILO, HAWAII - **BLDG 2** - **ROOF** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	A	VENT HOOD, DINING HALL	1119	94-00312
13 JAN 94	B	DINING HALL	1121	94-00313
13 JAN 94	C	DINING HALL	1139	94-00314
13 JAN 94	D	DINING HALL	1148	94-00315
13 JAN 94	E	GUTTER BRACKET, DINING HALL	1201	94-00316
13 JAN 94	F	DINING HALL	1205	94-00317
13 JAN 94	G	VENT HOOD, DINING HALL	1332	94-00318
13 JAN 94	H	DINING HALL	1329	94-00319
13 JAN 94	I	LEFT SIDE, DINING HALL	1340	94-00320
13 JAN 94	J	DINING HALL	1339	94-00321

HILO, HAWAII - BLDG 2 - ROOF MAP



• Flag Pole

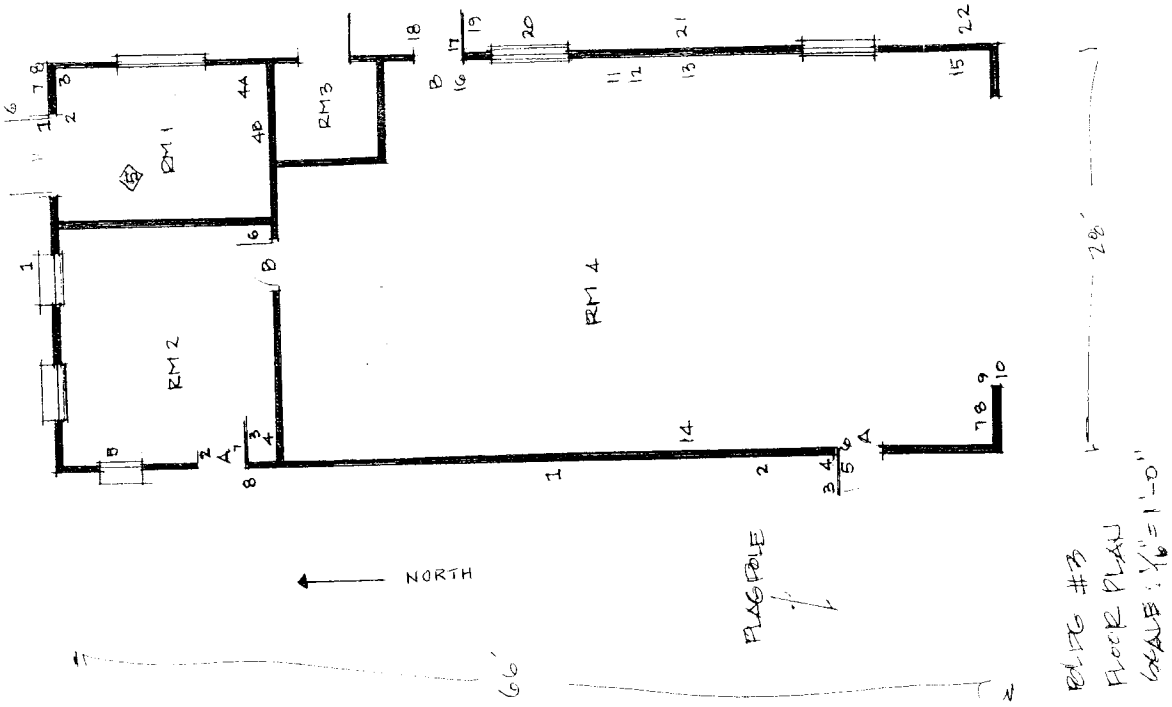
HILO, HAWAII - **BLDG 3** - **INTERIOR** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	RM1-3	METAL PIPE	0824	94-00364
13 JAN 94	RM1-4	WALL, NORTHSTAR	0826	94-00365
13 JAN 94	RM1-1	DOOR	0828	94-00366
13 JAN 94	RM1-2	DOOR JAMB	0830	94-00367
13 JAN 94	RM1-4B	BACKWALL	0832	94-00368
13 JAN 94	RM1-5	CEILING JOIST, GREEN	0834	94-00369
13 JAN 94	RM2-5	WALL, DOOR	0858	94-00370
13 JAN 94	RM2-3	DOOR	0900	94-00371
13 JAN 94	RM2-4	WALL	0910	94-00372
13 JAN 94	RM2-6	DOOR (SAFETY SHOP)	0912	94-00373
13 JAN 94	RM2-2	DOOR JAMB (A)	0914	94-00374
13 JAN 94	RM4-5	DOOR (A)	0950	94-00336
13 JAN 94	RM4-6	DOOR JAMB	0952	94-00337
13 JAN 94	RM4-7	WALL, E, BROWN	0954	94-00338
13 JAN 94	RM4-12	WALL, N, CUSTOM	1000	94-00339
13 JAN 94	RM4-9	CASING, ROLLER	1004	94-00340
13 JAN 94	RM4-8	WALL, E, WHITE	1006	94-00341
13 JAN 94	RM4-11	WALL, N, WHITE	1012	94-00342
13 JAN 94	RM4-13	PIPE, N WALL	1014	94-00343
13 JAN 94	RM4-14	PIPE, S WALL	1016	94-00344
13 JAN 94	RM4-15	CONDUIT, METAL, N WALL	1020	94-00345
13 JAN 94	RM4-16	DOOR JAMB, N WALL	1025	94-00346
13 JAN 94	RM4-17	DOOR, N WALL	1032	94-00347

HILO, HAWAII - **BLDG 3 - EXTERIOR** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	ORM1-6	DOOR	0848	94-00388
13 JAN 94	ORM1-7	WALL	0850	94-00389
13 JAN 94	ORM2-1	CAGE, WINDOW	0852	94-00390
13 JAN 94	ORM1-8	PIPE, DRAIN	0854	94-00391
13 JAN 94	ORM2-7	DOOR	0932	94-00392
13 JAN 94	ORM4-1	WALL	0934	94-00393
13 JAN 94	ORM4-2	PIPE	0936	94-00394
13 JAN 94	ORM2-8	DOOR JAMB	0938	94-00395
13 JAN 94	ORM4-3	DOOR	0938A	94-00396
13 JAN 94	ORM4-4	DOOR JAMB	0940	94-00397
13 JAN 94	ORM4-10	FRAME, DOOR, GARAGE	1010	94-00398
13 JAN 94	ORM4-21	WALL, N	1030	94-00399
13 JAN 94	ORM4-19	DOOR, N	1034	94-00400
13 JAN 94	ORM4-20	CAGE, WINDOW	1036	94-00401
13 JAN 94	ORM4-18	DOOR JAMB, N	1036A	94-00362
13 JAN 94	ORM4-22	BOX, METAL, N	1040	94-00363

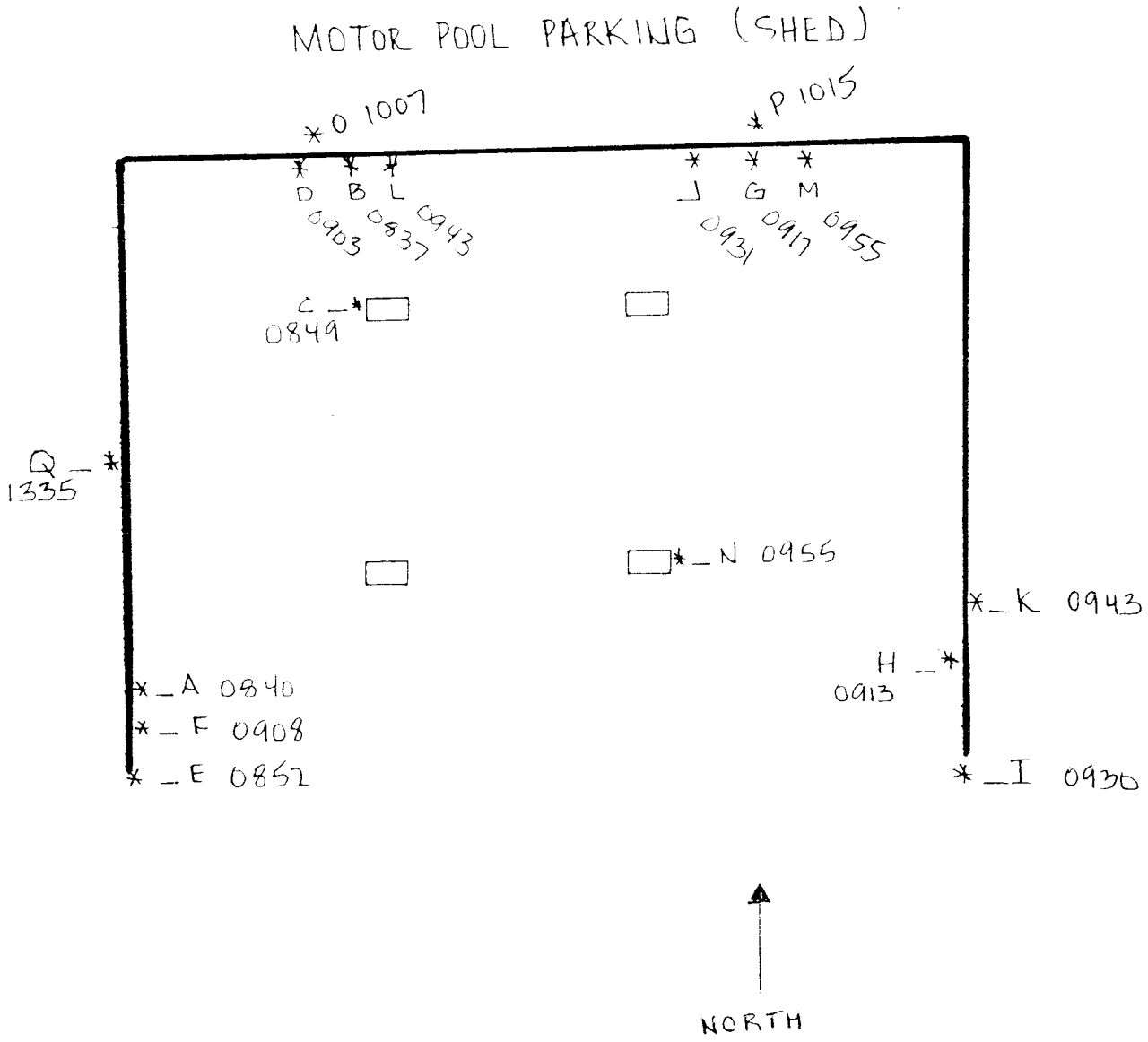
HILO, HAWAII - BLDG 3 - INTERIOR & EXTERIOR
MAP



HILO, HAWAII - **SHED** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	A	WALL, RIGHT	0840	94-00348
13 JAN 94	B	WALL, BACK	0837	94-00349
13 JAN 94	C	BEAM, LEFT MIDDLE REAR	0849	94-00350
13 JAN 94	D	CONE, REAR FDN	0903	94-00351
13 JAN 94	E	BEAM, RIGHT	0852	94-00352
13 JAN 94	F	CONCRETE, FRONT	0908	94-00353
13 JAN 94	G	WALL, BACK	0917	94-00354
13 JAN 94	H	CONCRETE, LEFT SIDE	0913	94-00355
13 JAN 94	I	RIM, BEAM, LEFT SIED	0930	94-00356
13 JAN 94	J	CONCRETE, REAR FDN	0931	94-00357
13 JAN 94	K	WALL, LEFT, OUTSIDE	1942	94-00358
13 JAN 94	L	BEAM, BACK WALL	0943	94-00359
13 JAN 94	M	BEAM, BACK WALL	0955	94-00360
13 JAN 94	N	BEAM, RIM, LEFT CENTER	0956	94-00361
13 JAN 94	O	WALL, BEHIND	1007	94-00309
13 JAN 94	P	WALL, BEHIND	1015	94-00310
13 JAN 94	Q	SIDE, RIGHT	1335	94-00311

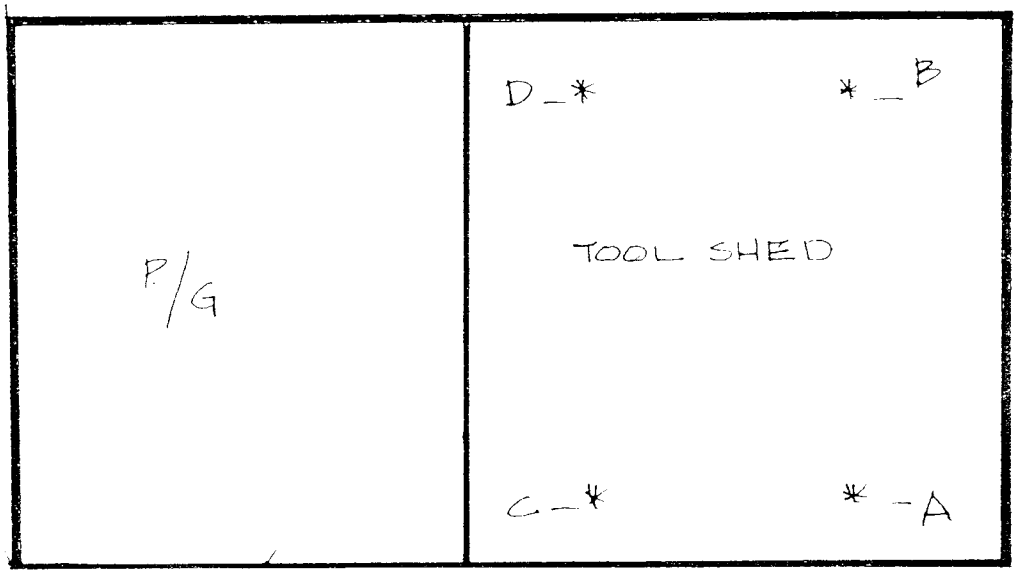
HILO, HAWAII - SHED
MAP



HILO, HAWAII - **SHED** - **ROOF** - PAINT CHIP SAMPLES

DATE	SAMPLE POINT #	LOCATION	TIME	LAB NO.
13 JAN 94	A	TOOL SHED, ROOF	1405	94-00305
13 JAN 94	B	TOOL SHED, ROOF	1405A	94-00306
13 JAN 94	C	TOOL SHED, ROOF	1427	94-00307
13 JAN 94	D	TOOL SHED, ROOF	1429	94-00308

HILO, HAWAII - SHED - ROOF MAP



Flag Pole ←

NORTH →

HILO, HAWAII

LAB ANALYSIS

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00286	B2 FOOD STORAGE WALL 1515A	0.101
94-00287	B2 SUPPLY OFFICE WALL 1515	0.007
94-00288	B2 SCULLERY WALL 1523	<0.005
94-00289	B2 SUPPLY OFFICE WALL 1530	0.008
94-00290	B2 FOOD STORAGE DOOR JAMB 1531	0.080
94-00291	B2 SCULLERY WALL 1540	0.005
94-00292	B2 LOCKER ROOM BEAM 1550	0.53
94-00293	B2 LOCKER ROOM HEAD 1557	<0.005
94-00294	B2 LOCKER ROOM WALL 1600	0.043
94-00295	B2 LOCKER ROOM SHOWER 1605	<0.005
94-00296	B2 LOCKER ROOM WINDOW 1609	0.022
94-00297	B2 JAN. ROOM WALL 1615	<0.005
94-00298	B2 LOCKER ROOM STALL 1617	0.006
94-00299	BLDG 2-14	<0.005
94-00300	BLDG 2-15	<0.005
94-00301	BLDG 2-16	0.006
94-00302	BLDG 2-17	0.021
94-00303	BLDG 2-18	0.067
94-00304	BLDG 2-19	0.038
94-00305	TOOL SHED - ROOF A	0.045
94-00306	TOOL SHED - ROOF B	0.013
94-00307	TOOL SHED - ROOF C	0.010
94-00308	TOOL SHED - ROOF D	0.013
94-00309	SHED - O	0.441
94-00310	SHED - P	0.363
94-00311	SHED - Q	0.097

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00312	DINING HALL (ROOF) - A	<0.005
94-00313	DINING HALL (ROOF) - B	0.052
94-00314	DINING HALL (ROOF) - C	0.062
94-00315	DINING HALL (ROOF) - D	0.071
94-00316	DINING HALL (ROOF) - E	0.022
94-00317	DINING HALL (ROOF) - F	0.070
94-00318	DINING HALL (ROOF) - G	0.005
94-00319	DINING HALL (ROOF) - H	<0.005
94-00320	DINING HALL (ROOF) - I	0.021
94-00321	DINING HALL (ROOF) - J	0.015
94-00322	B2 ASSEMBLY HALL - WALL 0926	<0.005
94-00323	B2 ASSEMBLY HALL - WALL 0928	<0.005
94-00324	B2 ASSEMBLY HALL - STEEL BEAM 0930	0.120
94-00325	B2 ASSEMBLY HALL - WINDOW 0932	0.015
94-00326	B2 ASSEMBLY HALL - DOOR 0944	<0.005
94-00327	B2 MAINT ROOM - DOOR FR. 0947	0.079
94-00328	B2 MAINT ROOM - DOOR 1000	0.097
94-00329	B2 MAINT ROOM - WALL 1002	0.027
94-00330	B2 MAINT ROOM - WALL 1004	<0.005
94-00331	B2 FOOD PREP - WALL 1431	0.005
94-00332	B2 FOOD PREP - WALL 1433	0.006
94-00333	B2 HEATER ROOM - WALL 1500	<0.005
94-00334	B2 FOOD STORAGE - WALL 1503	<0.005
94-00335	B2 HEATER ROOM PIPE 1513	<0.005
94-00336	RM 4-5	2.5
94-00337	RM 4-6	3.4

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00338	RM 4-7	0.049
94-00339	RM 4-12	0.045
94-00340	RM 4-9	4.3
94-00341	RM 4-8	0.041
94-00342	RM 4-11	0.053
94-00343	RM 4-13	0.456
94-00344	RM 4-14	0.48
94-00345	RM 4-15	5.4
94-00346	RM 4-16	3.2
94-00347	RM 4-17	0.313
94-00348	SHED - A	<0.005
94-00349	SHED - B	0.021
94-00350	SHED - C	0.009
94-00351	SHED - D	0.007
94-00352	SHED - E	3.2
94-00353	SHED - F	0.098
94-00354	SHED - G	0.008
94-00355	SHED - H	0.024
94-00356	SHED - I	7.3
94-00357	SHED - J	0.008
94-00358	SHED - K	2.6
94-00359	SHED - L	7.1
94-00360	SHED - M	7.8
94-00361	SHED - N	0.015
94-00362	ORMA - 18	0.182
94-00363	ORMA - 22	3.1

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00364	RM 1-3	0.047
94-00365	RM 1-4	<0.005
94-00366	RM 1-1	0.054
94-00367	RM 1-2	0.059
94-00368	RM 1-4B	0.029
94-00369	RM 1-5	0.368
94-00370	RM 2-5	0.005
94-00371	RM 2-3	0.037
94-00372	RM 2-4	0.016
94-00373	RM 2-6	0.061
94-00374	RM 2-2	0.007
94-00375	BLDG 2-1	0.033
94-00376	BLDG 2-2	4.4
94-00377	BLDG 2-3	0.024
94-00378	BLDG 2-4	0.033
94-00379	BLDG 2-5	0.445
94-00380	BLDG 2-6	0.093
94-00381	BLDG 2-7	<0.005
94-00382	BLDG 2-8	0.006
94-00383	BLDG 2-9	0.078
94-00384	BLDG 2-10	0.036
94-00385	BLDG 2-11	0.010
94-00386	BLDG 2-12	0.007
94-00387	BLDG 2-13	<0.005
94-00388	ORM 1-6	0.008
94-00389	ORM 1-7	<0.005

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00390	ORM 2-1	<0.005
94-00391	ORM 1-8	0.006
94-00392	ORM 2-7	0.005
94-00393	ORM 4-1	<0.005
94-00394	ORM 4-2	0.254
94-00395	ORM 2-8	<0.005
94-00396	ORM 4-3	2.1
94-00397	ORM 4-4	2.7
94-00398	ORM 4-10	2.5
94-00399	ORM 4-21	<0.005
94-00400	ORM 4-19	0.048
94-00401	ORM 4-20	<0.005
94-00403	B1 WALL INDOOR - 15	<0.005
94-00404	B1 WALL INDOOR - 16	<0.005
94-00405	B1 WALL INDOOR - 17	<0.005
94-00406	B1 WALL INDOOR - 18	0.005
94-00407	B1 WALL INDOOR - 19	<0.005
94-00408	B1 WINDOW - 20	0.006
94-00409	B1 WALL INDOOR - 21	<0.005
94-00410	B1 WINDOW INDOOR - 22	0.007
94-00411	B1 WALL INDOOR - 23	<0.005
94-00412	B1 WALL INDOOR - 24	0.006
94-00413	B1 WALL INDOOR - 25	0.017
94-00414	B1 WALL INDOOR - 26	0.186
94-00415	B1 WALL INDOOR - 27	0.074
94-00416	B1 WALL INDOOR - 28	<0.005
94-00417	B1 WALL OUTSIDE - 1	0.011

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

12 Feb 94

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00417	B1 WALL OUTSIDE - 1	0.011
94-00418	B1 PIPE OUTSIDE - 2	0.013
94-00419	B1 DOOR OUTSIDE - 3	<0.005
94-00420	B1 DOOR JAMB OUTSIDE - 4	0.040
94-00421	B1 SCREEN OUTSIDE - 5	0.005
94-00422	B1 DOOR OUTSIDE - 6	0.013
94-00423	B1 RAILING OUTSIDE - 7	2.3
94-00424	B1 WALL OUTSIDE - 8	0.008
94-00425	B1 WALL OUTSIDE - 9	0.048
94-00426	B1 WALL OUTSIDE - 10	<0.005
94-00427	B1 TRIANGLE ALARM - 11	0.184
94-00428	B1 WINDOW OUTSIDE - 12	0.75
94-00429	B1 DOOR INSIDE - 13	0.025
94-00430	B1 DOOR JAMB INDOOR - 14	0.038
94-00431	B1 WALL INDOOR - 43	0.024
94-00432	B1 WALL INDOOR - 44	0.041
94-00433	B1 WALL INDOOR - 45	0.058
94-00434	B1 WALL INDOOR - A	<0.005
94-00435	B1 WALL INDOOR - B	<0.005
94-00436	B1 WALL INDOOR - C	<0.005
94-00437	B1 PARKING STALL FIRST LINE	0.098
94-00438	B1 WALL INDOOR 29	0.123
94-00439	B1 WALL INDOOR 30	0.071
94-00440	B1 WALL INDOOR 31	0.072
94-00441	B1 WALL INDOOR 32	0.076

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

NAVY PUBLIC WORKS CENTER
ENVIRONMENTAL LABORATORY
PEARL HARBOR, HAWAII 96860-5470
(808) 474-3704

TO: PWC CODE 213, F. Pena
PWC CODE 301
PWC CODE 09K, Linda Brown

12 Feb 94

PURPOSE FOR EXAMINATION: Analyze paint chips for total percent lead.

DATE RECEIVED: 14 Jan 94
JON: PENDING
ESA No: N/A

PARAMETERS

A Lead, %

LAB NO	SAMPLE ID	A
94-00442	B1 WALL INDOOR 33	0.206
94-00443	B1 WALL INDOOR 34	0.223
94-00444	B1 WALL INDOOR 35	0.124
94-00445	B1 WALL INDOOR 36	0.077
94-00446	B1 WALL INDOOR 37	0.035
94-00447	B1 WALL INDOOR 38	0.052
94-00448	B1 STALL INDOOR 39	0.338
94-00449	B1 DOOR INDOOR 40	0.253
94-00450	B1 WALL INDOOR 41	2.5
94-00451	B1 WALL INDOOR 42	0.012

REMARKS: Paint chips are contained in ziploc bags and transported in a cardboard box.

ANALYST: Daniel M. Muranaka
DANIEL M. MURANAKA

HILO, HAWAII

SAMPLE
CHAIN OF CUSTODY

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C3L 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00286	B2 _ Food Storage _ Wall 1515A	01/13/94	1515		1/Ziplock	N/A	Percent Lead		
00287	" Supply Office _ Wall 1515	"	1515		"		"		
00288	" Scullery _ Wall 1523	"	1523		"		"		
00289	" Supply Office _ Wall 1530	"	1530		"		"		
00290	" Food Storage _ Door Jam 1531	"	1531		"		"		
00291	" Scullery _ Wall 1540	"	1540		"		"		
00292	" Locker Rm _ Beam 1550	"	1550		"		"		
00293	" " " _ Head 1557	"	1557		"		"		
00294	" " " - Wall 1600	"	1600		"		"		
00295	" " " - Shower 1605	"	1605		"		"		
00296	" " " _ Window 1609	"	1609		"		"		
00297	" Jan. Rm. _ Wall 1615	"	1615		"		"		
00298	" Locker Rm. _ Stall 1617	"	1617		"		"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : CRISOSTOMO, VIDA, ENOS		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94 / 1315	Received by : R Baker	Date/Time : 1/14/94 1240

6280-4 (6-93)

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : [illegible]
Phone Number : 474-0390

Report to : 0312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)

[ ] Oil
[✓] Paint Chips
[ ] Potable Water
[ ] Sludge
[ ] Soil
[ ] Wastewater
[ ] Wipes
[ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00299	Bldg 2 - 14	1/13/94	1132		1/ziplock	N/A	Percent Lead		
00300	- 15		1140						
301	- 16		1142						
302	- 17		1144						
303	- 18		1400						
304	- 19		1402						
305	TOOL SHED - ROOF A		1405		1/ziplock	N/A	Percent Lead		
306	" " " B		1405A		"	"	"		
307	" " " C		1427		"	"	"		
308	" " " D		1429		"	"	"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE, VIDA, CRISOSTOMO		Transported and Stored in :	
Relinquished by: [signature]	Date/Time : 01/14/94 1315	Received by : [signature]	Date/Time : 1/14/94 1844

PH PWC 6280/4 (6-93)

White (Laboratory File Copy) Yellow (Client Copy) Pink (Receiving Copy)

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00309	SHED_O	01/13/94	1007		1 / Ziplock		Percent Lead		
310	SHED_P	"	1015		"		"		
311	SHED-Q	"	1335		"		"		
312	DINING Hall (Roof)_A	"	1119		"		"		
313	DINING HALL (Roof)_B	"	1121		"		"		
314	DINING HALL (ROOF)_C	"	1139		"		"		
315	DINING HALL (ROOF)_D	"	1148		"		"		
316	DINING HALL (ROOF)_E	"	1201		"		"		
317	DINING HALL (ROOF)_F	"	1205		"		"		
318	DINING HALL (ROOF)_G	"	1332		"		"		
319	DINING HALL (ROOF)_H	"	1329		"		"		
320	DINING HALL (ROOF)_I	"	1340		"		"		
321	DINING HALL (ROOF)_J	"	1339		"		"		

REMARKS (Special handling, field conditions, etc.) : Pain chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : CRISOSTOMO, VIDA, ENOS

Transported and Stored in :

Relinquished by	Date/Time	Received by	Date/Time
[signature]	01/14/94 / 1315	[signature]	1/14/94 1849

NPWC 6280/4 (6-93)

White - Laboratory File Copy

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00322	B2 - Assembly Hall - Wall 0926	01/13/94	0926		1/ZIPLOCK	N/A	Percent Lead		
323	" " " - Wall 0928	"	0928		"		"		
324	" " " Steel Beam 0930	"	0930		"		"		
325	" " " - Window 0932	"	0932		"		"		
326	" " " - Door 0944	"	0944		"		"		
327	" Maint. Rm. - Door Fr. 0947	"	0947		"		"		
328	" " " - Door 1000	"	1000		"		"		
329	" " " - Wall 1002	"	1002		"		"		
330	" " " - Wall 1004	"	1004		"		"		
331	" Food Prep - Wall - 1431	"	1431		"		"		
332	" " " - Wall 1433	"	1433		"		"		
333	" Heater Rm - Wall 1500	"	1500		"		"		
334	" Food Storage - Wall 1503	"	1503		"		"		
335	" Heater Rm - Pipe 1513	"	1513		"		"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : PENA, CRISOSTOMO, VIDA		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94 / 1315	Received by : [signature]	Date/Time : 1/14/94 1252

NAVFAC 6280/4 (6-93)

BUILDING 3

PAGE 3 OF 3

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00336	RM4 -5	01/13/94	0950		1 ZIPLOCK	N/A	PERCENT LEAD		
337	RM4 - 6 Δ's	"	0952	"	"		"		
338	RM4 - 7	"	0954		"		"		
339	RM4 - 12	"	1000		"		"		
340	RM4 - 9	"	1004		"		"		
341	RM4 - 8	"	1006		"		"		
342	RM4 - 11	"	1012		"		"		
343	RM4 - 13	"	1014		"		"		
344	RM4 - 14	"	1016		"		"		
345	RM4 - 15	"	1020		"		"		
346	RM4 - 16	"	1025		"		"		
347	RM4 - 17	"	1032		"		"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE, CHARWELL		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94/ 1315	Received by : R Baker	Date/Time : 1/14/94 1256

PWC 6280/4 (6-93)

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. PENA
Phone Number : 474 0390

Report to : C312, 301
Address : NAVY PUBLIC WORKS CENTER
PEARL HARBOR, HI 96860-5470

MATRIX (Please check only one)

[ ] Oil
[✓] Paint Chips
[ ] Potable Water
[ ] Sludge
[ ] Soil
[ ] Wastewater
[ ] Wipes
[ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00348	SHED_A	01/13/94	0840		1 /Ziplock	N/A	Percent Lead		
349	SHED_B	"	0837		"		"		
350	SHED_L	"	0849		"		"		
351	SHED_D	"	0903		"		"		
352	SHED_E	"	0852		"		"		
353	SHED_F	"	0908		"		"		
354	SHED_G	"	0917		"		"		
355	SHED_H	"	0913		"		"		
356	SHED_I	"	0930		"		"		
357	SHED_J	"	0931		"		"		
358	SHED_K	"	0942		"		"		
359	SHED_L	"	0943		"		"		
360	SHED_M	"	0955		"		"		
361	SHED_N	"	0956		"		"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziplock bags and transported in a cardboard box.

Relinquished by (ers) : CRISOSTOMO, VIDA		Transported and Stored in :	
Relinquished by :	Date/Time : 01/14/94 / 1315	Received by :	Date/Time : 1/14/94 1300

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BUILDING 3
PAGE 2 OF F

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00362	ORMA-18	01/13/94	1036A		1 ZIPLOCK	N/A	PERCENT LEAD		
363	ORMA-22	01/13/94	1040		1 ZIPLOCK	N/A	PERCENT LEAD		
	↓INTERIOR SAMPLES↓								
364	RM1-3	01/13/94	0824		1 ZIPLOCK	N/A	PERCENT LEAD		
365	RM1-4	"	0826		"		"		
366	RM1-1	"	0828		"		"		
367	RM1-2	"	0830		"		"		
368	RM1-48	"	0832		"		"		
369	RM1-5	"	0834		"		"		
370	RM2-5	"	0858		"		"		
371	RM2-3	"	0900		"		"		
372	RM2-4	"	0910		"		"		
373	RM2-6	"	0912		"		"		
374	RM2-2	"	0914		"		"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELSE, CHADWELL, ENOS		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94/1314	Received by : R Baker	Date/Time : 1/14/94 1302

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SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00375	Bldg 2 - 1	1/13/94	1054		1/ziplock	N/A	Percent Lead		
376	- 2		1056						
377	- 3		1056						
378	- 4		1100						
379	- 5		1110						
380	- 6		1112						
381	- 7		1114						
382	- 8		1116						
383	- 9		1118						
384	- 10 -		1120						
385	11		1126						
386	12		1128						
387	13		1130						

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE. CHADWELL		Transported and Stored in :	
Relinquished by : F. Pena	Date/Time : 1/14/94/ 1312	Received by : R Baker	Date/Time : 1/14/94 1308

BUILDING 3
PAGE 1 OF 3 [redacted]

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00388	ORM1-6	01/13/94	0848		1/ZIPLOCK	N/A	PERCENT LEAD		
389	ORM1-7	"	0850		"		"		
390	ORM2-1	"	0852		"		"		
391	ORM1-8	"	0854		"		"		
392	ORM2-7	"	0932		"		"		
393	ORM4-1	"	0934		"		"		
394	ORM4-2	"	0936		"		"		
395	ORM2-8	"	0938		"		"		
396	ORM4-3	"	0938A		"		"		
397	ORM4-4	"	0940		"		"		
398	ORM4-10	"	1010		"		"		
399	ORM4-21	"	1030		"		"		
400	ORM4-19	"	1034		"		"		
401	ORM4-20	"	1036		"	↓	"		

REMARKS (Special handling, field conditions, etc.) : EXTERIOR SAMPLES - LEAD
Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE CHAWELL		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94 1315	Received by : [signature]	Date/Time : 1/14/94 1312

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SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

ob Order, ESA Number : 6905000
ontact Person : F. Pena
one Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00403	Bl. Wall indoor - 15	01/13/94	1416		1/ZIPLOCK	N/A	Percent Lead		
404	" , Wall indoor - 16	"	1420		"		"		
405	" - Wall indoor - 17	"	1440		"		"		
406	" - Wall indoor - 18	"	1442		"		"		
407	" - Wall indoor - 19	"	1444		"		"		
408	" - Window - 20	"	1446		"		"		
409	" - Wall indoor - 21	"	1448		"		"		
410	" - Window " - 22	"	1454		"		"		
411	" - Wall " - 23	"	1456		"		"		
412	" - Wall " - 24	"	1514		"		"		
413	" - Wall " - 25	"	1516		"		"		
414	" - Wall " - 26	"	1518		"		"		
415	" - Wall " - 27	"	1520		"		"		
416	" - Wall " - 28	"	1522		"	↓	"		

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : F. LISE		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94/ 1315	Received by : R Baker	Date/Time : 1/14/94 1315

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SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[✓] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00417	Bl - Wall outside - 1	01/13/94	1320		1/2 IPLOCK	N/A	Percent Lead		
418	" - Pipe outside - 2	"	1322						
419	" - Door outside - 3	"	1324						
420	" - Door Jam outside - 4	"	1326						
421	" - Screen outside - 5	"	1328						
422	" - Door outside - 6	"	1330						
423	" - Railing outside - 7	"	1340						
424	" - Wall outside - 8	"	1342						
425	" - Wall outside - 9	"	1344						
426	" - Wall outside - 10	"	1346						
427	" - Triangle Alarm - 11	"	1348						
428	" - Window outside - 12	"	1348A						
429	" - Door indoor - 13	"	1414						
430	" - Door Jam indoor - 14	"	1412						

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE		Transported and Stored in :	
Relinquished by : [signature]	Date/Time : 01/14/94 / 1322	Received by : R Baba	Date/Time : 1/14/94 1319

NPWC 6280/4 (6-93)

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SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

ob Order, ESA Number : 6905000
ontact Person : F. Pena
'hone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil
[✓] Paint Chips
[ ] Potable Water
[ ] Sludge
[ ] Soil
[ ] Wastewater
[ ] Wipes
[ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
94-00431	Bl_Wall indoor_43	01/13/94	1646		1/ ZipLock	N/A	Percent Lead		
432	" - Wall " - 44	"	1650		↓	↓	↓		
433	" - Wall " - 45	"	1652		↓	↓	↓		
434	" - Wall " - A	"	1632		↓	↓	↓		
435	" - Stall " - B	"	1637		↓	↓	↓		
436	" - Wall " - C	"	1645		↓	↓	↓		
437	" - Parking Stall - First Line	"	1641		↓	↓	↓		
~~438~~									

EMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE, VIDA, CRISOSTOMO

Relinquished by :	Date/Time :	Transported and Stored in : Received by :	Date/Time :
[signature]	01/14/94 / 1323	R. Baker	1/14/94 1321

6280/4 (6/92)

SAMPLE CHAIN OF CUSTODY

Navy Public Works Center - Environmental Laboratory, Code 330
Pearl Harbor, HI 96860-5470
Phone (808) 474-3704, FAX (808) 471-4534

Job Order, ESA Number : 6905000
Contact Person : F. Pena
Phone Number : 474-0390

Report to : C312, 301
Address : Navy Public Works Center
Pearl Harbor, HI 96860-5470

MATRIX (Please check only one)
[ ] Oil [ ] Soil
[ ] Paint Chips [ ] Wastewater
[ ] Potable Water [ ] Wipes
[ ] Sludge [ ] Other (Specify)

Lab Number	Sample Identification/Description	Sampling Date	Sampling Time	Residual Chlorine (ppm)	Number/Type of Containers	Field/Lab Preservation	Analysis Required	Storage Area	Analysis Code
-00438	Bl. Wall indoor - 29	01/13/94	1532		1/ZIPLOCK	N/A	Percent Lead		
439	" - Wall " - 30	"	1534		"				
440	" - Wall " - 31	"	1544		"				
441	" - Wall " - 32	"	1546		"				
442	" - Wall " - 33	"	1550		"				
443	" - Wall " - 34	"	1552		"				
444	" - Wall " - 35	"	1624		"				
445	" - Wall " - 36	"	1628		"				
446	" - Wall " - 37	"	1630		"				
447	" - Wall " - 38	"	1632		"				
448	" - Stall " - 39	"	1634		"				
449	" - Door " - 40	"	1640		"				
450	" - Wall " - 41	"	1642		"				
451	" - Wall " - 42	"	1644		"				

REMARKS (Special handling, field conditions, etc.) : Paint chips are contained in ziploc bags and transported in a cardboard box.

Sampler(s) : FELISE, ENOS		Transported and Stored in :	
Relinquished by: [signature]	Date/Time : 01/14/94 / 1326	Received by : [signature]	Date/Time : 1/14/94 1324

SECTION 6

KUNIEDA USAR CENTER

HILO, HAWAII

6.0 FACILITY DESCRIPTION

This facility is located in Hilo, Hawaii and houses a detachment from Company A, 411th Engineer Battalion, as well as a detachment from 100th battalion, 442nd Infantry. Vehicles located at this facility include two bulldozers, two loaders, ten HMMWVs, two trucks, 2 pick-up trucks, one generator, and four trailers. Maintenance on the equipment is performed by two full-time and up to 6 reserve personnel. A detachment of maintenance personnel from AMSA in Oahu supports maintenance functions here, as needed.

This facility has a flammable storage area and a waste accumulation area located adjacent to the main building. Overpacks and pallets are used for storage of drums as a precaution against leaks or spills. There is currently under construction a washrack with a closed loop water recycling system. Use of this system for washing vehicles will eliminate the need for used washwater disposal and eliminate a need for discharge permit for this facility.

6.1 PROCESS DESCRIPTIONS AND SCHEMATICS

Maintenance operations performed at this facility include oil and coolant changes; engine, transmission and brake maintenance; battery and tire replacement; and painting. Respirators are used only for brake jobs, all other maintenance functions do not require use of personnel protection equipment other than gloves and goggles (level D functions).

A brief description of maintenance processes using hazardous materials and generating hazardous wastes is provided below.

6.1.1 Fluid Change Out/Lubrication Operations

The fluids changeout operations include changing engine oil, gear and hydraulic oil, brake oil, and antifreeze in various vehicles, engineering equipment, and power generation equipment maintained at this facility. Associated filters are also changed. Various other general greasing and lubrication operations are also performed here. For higher level maintenance of engineering equipment, including higher weight oil changes (80/90 Weight), the equipment is often sent to Oahu via barge.

Oils are changed or topped off in the equipment. Since 1995, has benefited from enhancements to the Army Oil Analysis Program (AOAP). Samples of oil are collected from vehicles and sent for a laboratory analysis. If the laboratory results indicate deterioration in certain oil characteristics, only then the oil is changed. The used oils are collected in 55 gallon drums. Oil samples are collected from the drums and sent for analysis for hazardous characteristics. The used oils are disposed of in accordance with the laboratory results by Unitek, which is under contract to pick up and dispose all wastestreams generated by this facility.

Fuel and oil filters are drained and disposed of as solid waste. The oil filters are currently not crushed. Used antifreeze is stored in the drum and tested, and is picked up by Unitek for proper disposal.

A general process flow diagram is provided as Figure 6.1

6.1.2 Painting Process

Only a minimum amount of painting is performed at this facility. The painting mostly consists of touch-up painting using acrylic paint, applied using brushes. Use of spray paint is not allowed at this facility. Also, CARC paint is not used at this facility. Painting materials stored at this facility include thinners, acrylic paints and primers (non-CFC type). Waste generated from painting process includes used rags, brushes, and

empty aerosol and paint cans. The brushes are not cleaned using solvents, but are allowed to dry and disposed as solid waste. Empty cans are wiped clean and disposed of as solid waste. Rags are also disposed as solid waste. No waste paint/thinners were generated from the painting process in 1994 and 1995. A general process flow diagram is provided as Figure 6.2.

6.1.3 Degreasing/Cleaning Operations

Most components and parts usually require cleaning and degreasing prior to processing or installation to the vehicle. One part-washer is used at this facility, with simple green as the parts washing fluid. The parts washer constantly recycles and purifies the simple green; stored in the tank through an in-line filter. The in-line filters are generally changed every six moths. The simple green in the part-washer tank was replaced twice within last six months, each change requiring 30 gallons of fresh simple green. The waste simple green was disposed of as hazardous waste. Used filters are collected in a drum for disposal as hazardous waste. A general process flow diagram is provided in Figure 6.3.

6.1.4 Battery Operations

Batteries are activated at this facility, and also checked and serviced as needed for all the vehicles. Primarily lead-acid batteries are used. Approximately 25 to 30 batteries are changed out annually and the used batteries are sent to DPW, Pohakuloa Training Area (PTA) for recycling. The battery servicing includes topping off the batteries with acid and distilled water. A separate acid storage room is maintained at this facility, approximately 10 to 15 gallons of acid is stored here. A typical process flow diagram is provided as Figure 6.4.

6.1.5 Miscellaneous Operations

Other miscellaneous waste streams generated from this facility include waste diesel drained from vehicles during various maintenance operations. The diesel is collected in 55 gallon drums and disposed as hazardous waste, if it cannot be reused or

has been contaminated. Brake shoes removed from vehicles are stored in a separate drum and picked up by Unitek for disposal at county landfill as non-regulated waste.

6.2 BASELINE INVENTORY

Based on the data obtained during the site visit, a baseline inventory of hazardous material usage, hazardous waste generation, and municipal solid waste generation is prepared for this facility. The comprehensive baseline inventory covers all the operations performed at this facility.

6.2.1 Hazardous Material Usage

A total of 2,800 lb. of hazardous materials were used in year 1995, a breakdown is provided in Table 6.1. A total of about 800 lb. of TRI chemicals were used in 1995 as shown in Table 6.2. A total of about 2.3 lb. of EPA 17 chemicals, as shown in Table 6.3, and no ODCs were used in 1995. Records for 1994 were not available.

6.2.2 Waste Generation

A total of 200 lb. of hazardous waste was generated in 1995 as shown in Table 6.4. Also, about 7,900 lb. of non-regulated waste was generated in 1995. Records for 1994 were not available. No records for solid waste generation were available for this facility.

6.3 ENERGY REQUIREMENT

The only energy source to this facility is electrical power. Based on the electrical power records maintained at the 9th ARCOM headquarters at Ft. DeRussy, a total of $34,200 was spent for electrical power in year 1995.

6.4 POLLUTION PREVENTION INITIATIVES

The major waste stream from this facility was used oil generated through maintenance of various tactical and engineering vehicles. The previous maintenance

schedule called for oil changes in vehicles based on fixed time intervals, irrespective of the extent of vehicle usage during that time period. This practice resulted in procurement and disposal/recycling of large quantities of oils. This facility benefited from changes to the Army Oil Analysis Program (AOAP) in 1995. A sample of oil is collected from vehicles and sent for a laboratory analysis for impurities and viscosity. If the laboratory results show no deterioration in these characteristics, an oil change is not performed. An oil change is performed only if deterioration in these characteristics exceeds certain predetermined limits. This practice has resulted in substantial reduction in purchase of new oils and disposal/recycle of used oils.

This facility uses a part-washer. Simple green is used in the part-washer. Simple green by itself is non-hazardous and substitutes a hazardous solvent previously used at this facility. Although a continuous recycle type part-washer is supposed to eliminate the need for fluid change outs, simple green was replaced twice during the previous six months.

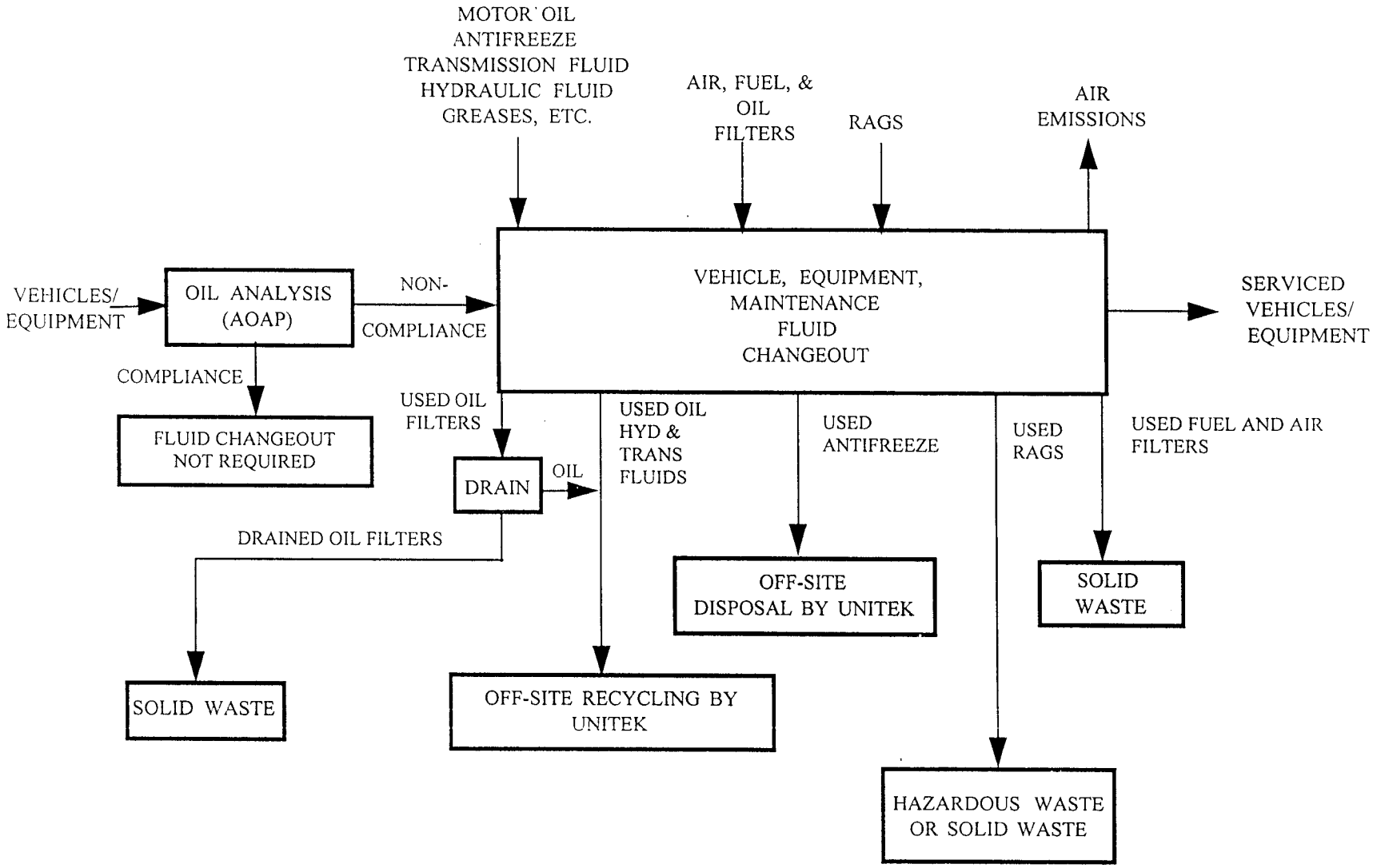
A closed loop vehicle wash rack is under construction at this facility. Once constructed, it will constantly recycle the vehicle wash water and eliminate the need for wastewater disposal to the sewer system. It will also eliminate the need for a discharge permit for this facility.

In 1995, all the fluorescent 40 Watt lighting was replaced with 32 Watt bulbs, reducing energy consumption for this facility. Solid waste is not recycled at this facility. All solid waste is disposed of in the dumpster, which is picked-up by the city for disposal at the local landfill.

6.5 AFFIRMATIVE PROCUREMENT

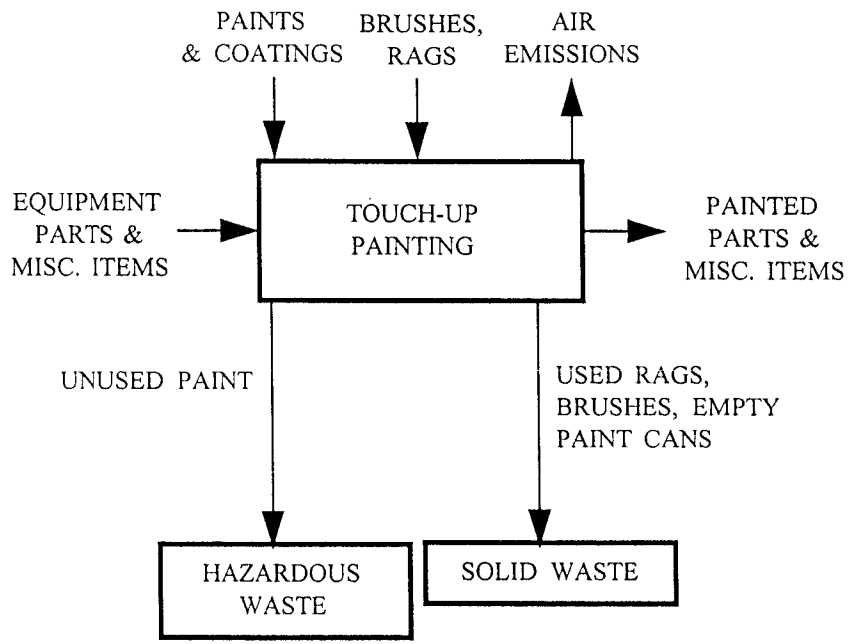
This facility procures simple green instead of cleaning solvents used in the past for the part-washer. Simple green is a non-hazardous and biodegradable product. As yet, this facility does not use recycled paper for office use.

FIGURE 6.1
FLUID CHANGEOUT / LUBRICATION OPERATIONS
KUNIEDA USAR CENTER
HILO, HAWAII



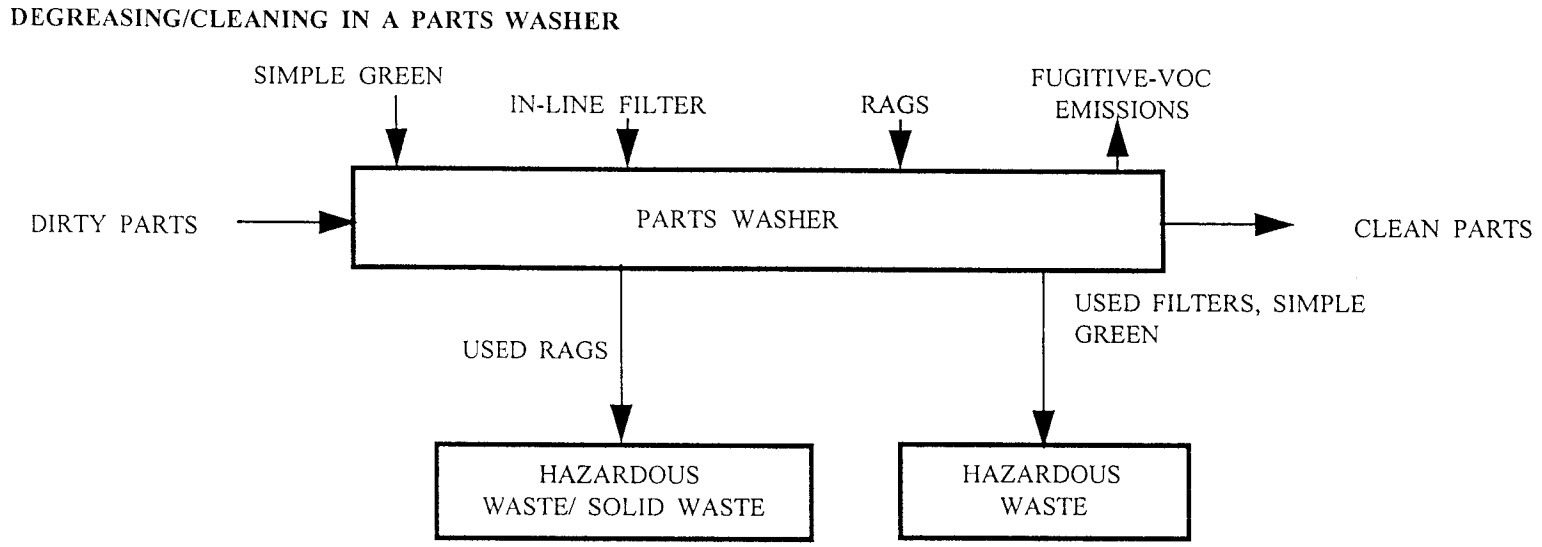
009/730118.05000/02100/figures/fig6-X/ppt

FIGURE 6.2
OPEN AIR/TOUCH-UP PAINTING
KUNIEDA USAR CENTER
HILO, HAWAII



009/730118.05000/02100/figures/fig6-X/ppt

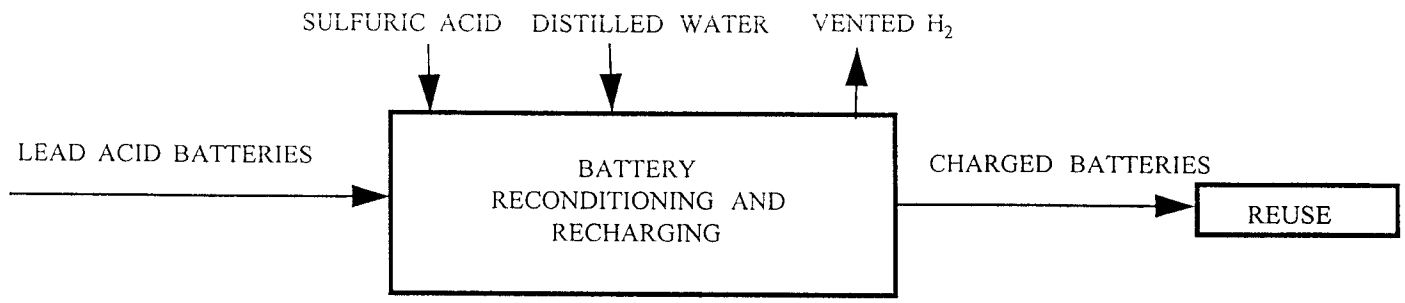
FIGURE 6.3
DEGREASING/CLEANING OPERATIONS
KUNIEDA USAR CENTER
HILO, HAWAII



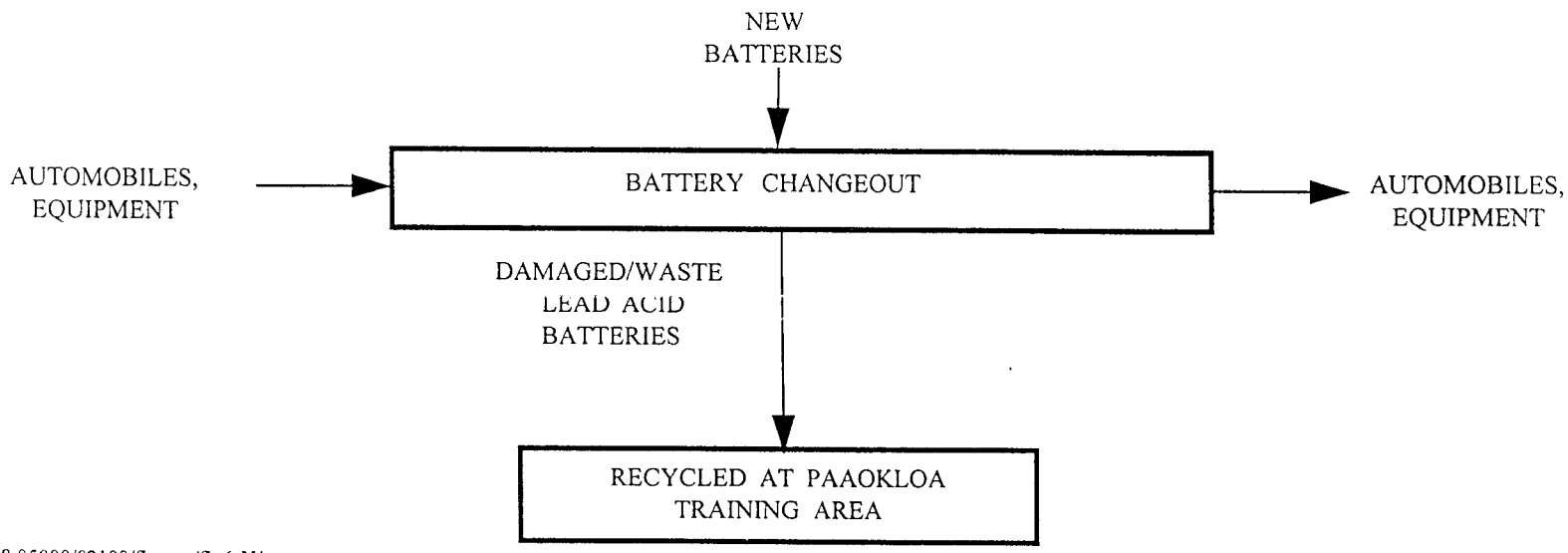
009/730118.05000/02100/figures/fig6-X/ppt

FIGURE 6.4
BATTERY OPERATIONS
KUNIEDA USAR CENTER
HILO, HAWAII

A.) BATTERY RECONDITIONING



B.) BATTERY REPLACEMENT



009/730118.05000/02100/figures/fig6-X/ppt

Table 6.1
Hazardous Material Usage (1995)
9th Army Reserve Support Command
Kunieda USAR, Hawaii

NSN	PRODUCT	QUANTITY (lbs.)
9150001866668	10W	222.68
9150001896729	30W	743.00
9150010355394	80/90 OIL	224.93
6850001817940	ANTIFREEZE	559.98
9150011233152	BRAKE FLUID	8.09
9150006574959	DEXTRON II	106.34
9150011977692	GREASE	1.47
8010002970593	PRIMER COAT	4.51
6810008431640	SULFURIC ACID	918.43
8010005587026	THINNER PAINT	25.35
	TOTAL	**2,814.78**

Table 6.2
TRI Chemicals
Kuneida USAR, Hawaii

Materials Issued on or after 1/1/95 and before 1/1/96.

Materials whose constituents (CAS #s) >= 0 lbs.

Benzene

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010005587026	REGULAR MINERAL SPIRITS	0.01
		Totals:	**0.01**

Chromium Compounds

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.29
		Totals:	**0.29**

Dichloromethane

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	1.27
		Totals:	**1.27**

Ethylene glycol

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	6850001817940	ANTIFREEZE,ETHYLENE GLYCOL,INHIBITED	517.23
		Totals:	**517.23**

Glycol Ethers

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	6850001817940	ANTIFREEZE,ETHYLENE GLYCOL,INHIBITED	13.98
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.12
		Totals:	**14.10**

Sulfuric acid

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	6810008431640	SULFURIC ACID	259.00
		Totals:	**259.00**

Table 6.2
TRI Chemicals
Kuneida USAR, Hawaii

Materials Issued on or after 1/1/95 and before 1/1/96.

Materials whose constituents (CAS #s) >= 0 lbs.

Toluene			
INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.71
		Totals:	0.71

Zinc Compounds			
INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.29
		Totals:	0.29

Table 6.3
EPA 17 Chemicals
Kuneida USAR, Hawaii

Materials Issued on or after 1/1/95 and before 1/1/96.

Materials whose constituents (CAS #s) >= 0 lbs.

Benzene

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010005587026	REGULAR MINERAL SPIRITS	0.01
		Totals:	**0.01**

Chromium & Chromium Compounds

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.29
		Totals:	**0.29**

Dichloromethane

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	1.27
		Totals:	**1.27**

Toluene

INSTALLATION	STOCK NUMBER	PRODUCT	TOTAL ISSUED QUANTITY (LBS)
KUNIEDA UAR	8010002970593	SO SURE YELLOW PRIMER 84-331	0.71
		Totals:	**0.71**

Table 6.4
Hazardous & Non-Regulated Waste Generation
9th Army Reserve Support Command
Kuneida USAR, Hawaii

Waste Type	Operation Generating Waste	Total Quantity	
		1994	1995
Hazardous Waste			
Waste Fuels	Vehicle Maintenance	-	29 gal.
Non-Regulated Waste			
Used Oil	Vehicle Maintenance	-	7,000 lbs.
Miscellaneous			
-simple green	Vehicle Maintenance	-	700 lbs.
-asbestos brake shoes	Vehicle Maintenance	-	265 lbs.

Appendix E

Regulatory Database Search Reports

The EDR Radius Map
with GeoCheck®

SFC Minoru Kunieda USARC
470 W. LANIKAULA ST
HILO, HI 96720

Inquiry Number: 01714247.2r

July 12, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	19
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-10
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Physical Setting Source Records Searched	A-13

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

470 W. LANIKAULA ST
HILO, HI 96720

COORDINATES

Latitude (North):	19.703600 - 19˚ 42' 13.0''
Longitude (West):	155.080800 - 155˚ 4' 50.9''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	281892.3
UTM Y (Meters):	2179888.0
Elevation:	118 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	19155-F1 HILO, HI
Most Recent Revision:	Not reported

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
KUNIEDA US ARMY RESERVE CTR 470 WEST LANIKAULA ST HILO, HI 96720	FINDS	110020725054

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions

EXECUTIVE SUMMARY

NPL RECOVERY	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
RCRA-SQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SWF/LF	Permitted Landfills in the State of Hawaii
UST	Underground Storage Tank Database
SPILLS	Release Notifications
INST CONTROL	Sites with Institutional Controls
VCP	Voluntary Response Program Sites
DRYCLEANERS	Permitted Drycleaner Facility Listing
BROWNFIELDS	Brownfields Sites
AIRS	List of Permitted Facilities

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STATE AND LOCAL RECORDS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 08/24/2005 has revealed that there are 10 SHWS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY OF HAWAII AT HILO	***200 W KAWILI ST***	***1/4 - 1/2 SE***	***3***	***7***
USDA FOREST SERVICE PSW EXPERI	***1643 KILAUEA AVE***	***1/4 - 1/2 E***	***5***	***9***
HILO SHOPPING CENTER	***1255 KILAUEA AVE***	***1/2 - 1 NNE***	***6***	***10***
SUN SUN LAU CHOP SUEY HOUSE	***1055 KINOOLE ST***	***1/2 - 1 N***	***7***	***10***
EXEMPT UST CLOSURE AT EXCELSIO	***458 KEKUANAOA ST***	***1/2 - 1 NE***	***8***	***11***
HILO QUALITY CLEANERS	***865 KINOOLE ST***	***1/2 - 1 N***	***9***	***12***
HILO QUALITY WASHERETTE	***210 HOKU ST***	***1/2 - 1 N***	***10***	***14***
HILO SODA WORKS	***270 E KAWILI ST***	***1/2 - 1 E***	***11***	***16***
LARRY'S KAIKOO CHEVRON	***835 KILAUEA AVE***	***1/2 - 1 NNE***	***12***	***17***
HILO MECHANICAL, INC	***50 HOLOMUA ST***	***1/2 - 1 E***	***13***	***18***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 02/01/2006 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

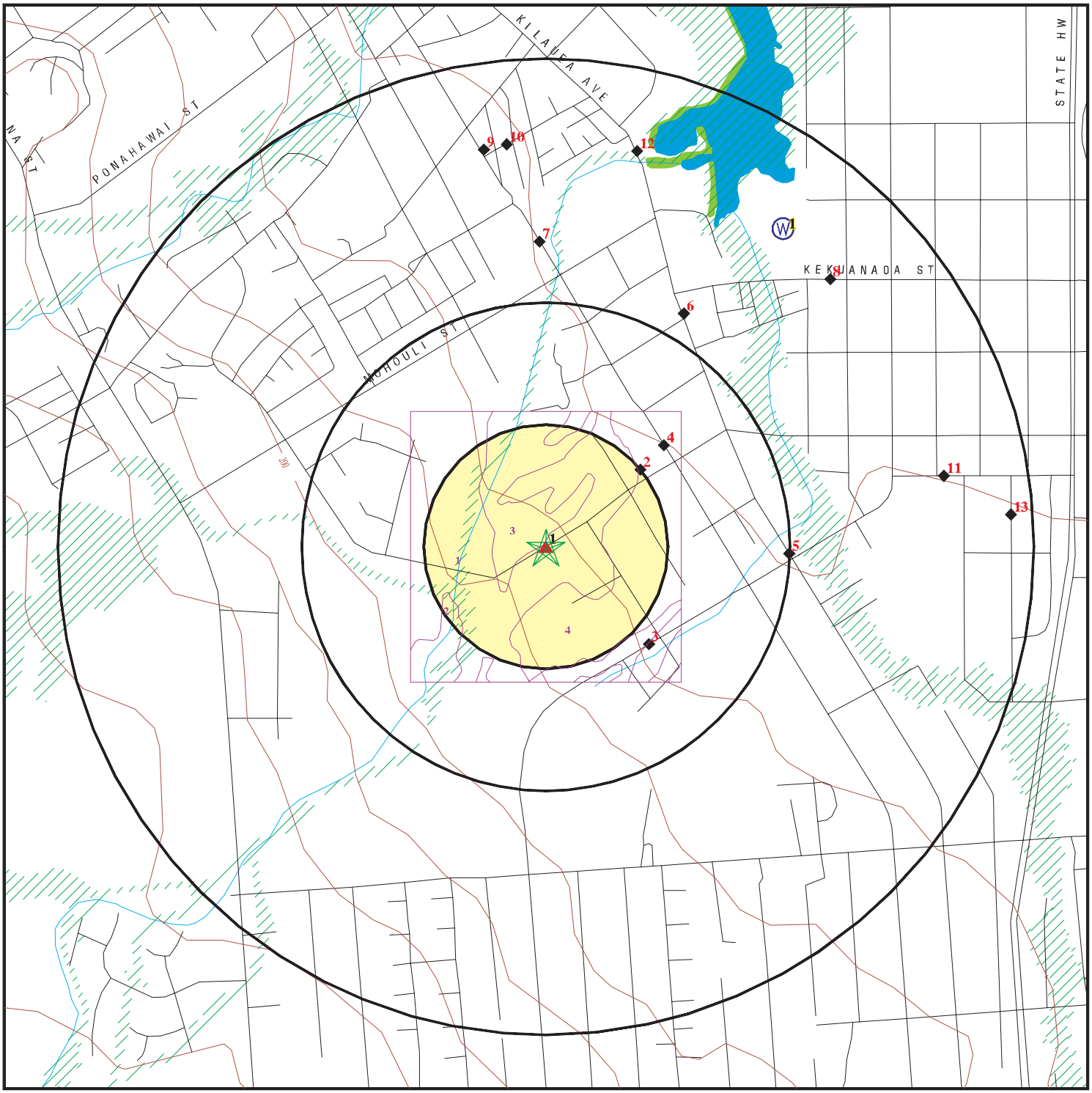
Lower Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY OF HAWAII AT HILO Facility Status: Site Cleanup Completed Facility Status: Site Cleanup Completed	***200 W KAWILI ST***	***1/4 - 1/2 SE***	***3***	***7***
HILO RADIATOR & GLASS Facility Status: Site Cleanup Completed	***1335 KINOOLE ST***	***1/4 - 1/2 NE***	***4***	***9***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ALAMO RENT A CAR, HILO INTERNATIONAL AIRPORT	SHWS, SPILLS
HILO JUDICIARY CENTER PROJECT	SHWS, INST CONTROL
LAEHALA STREET DRUM SITE	SHWS, SPILLS
HILO ARSENIC	SHWS, SPILLS
POHAKULOA TRAINING AREA	SHWS, SPILLS
POHAKULOA TRAINING AREA	CERCLIS
HILO BURRITO	CERCLIS
SOUTH HILO LANDFILL	SWF/LF
YAMADA TRANSFER, INC.	FINDS, LUST
USARMY POHAKULOA TRAINING AREA	RCRA-SQG, FINDS
USDA ARS	RCRA-SQG, FINDS
KULANI CORRECTIONAL FACILITY	FINDS, RCRA-LQG
KUNIEDA US ARMY RESERVE CTR	FINDS

OVERVIEW MAP - 01714247.2r



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: SFC Minoru Kunieda USARC	CLIENT: CH2M Hill
ADDRESS: 470 W. LANIKAULA ST HILO HI 96720	CONTACT: Mary Beth Jacques INQUIRY #: 01714247.2r
LAT/LONG: 19.7036 / 155.0808	DATE: July 12, 2006

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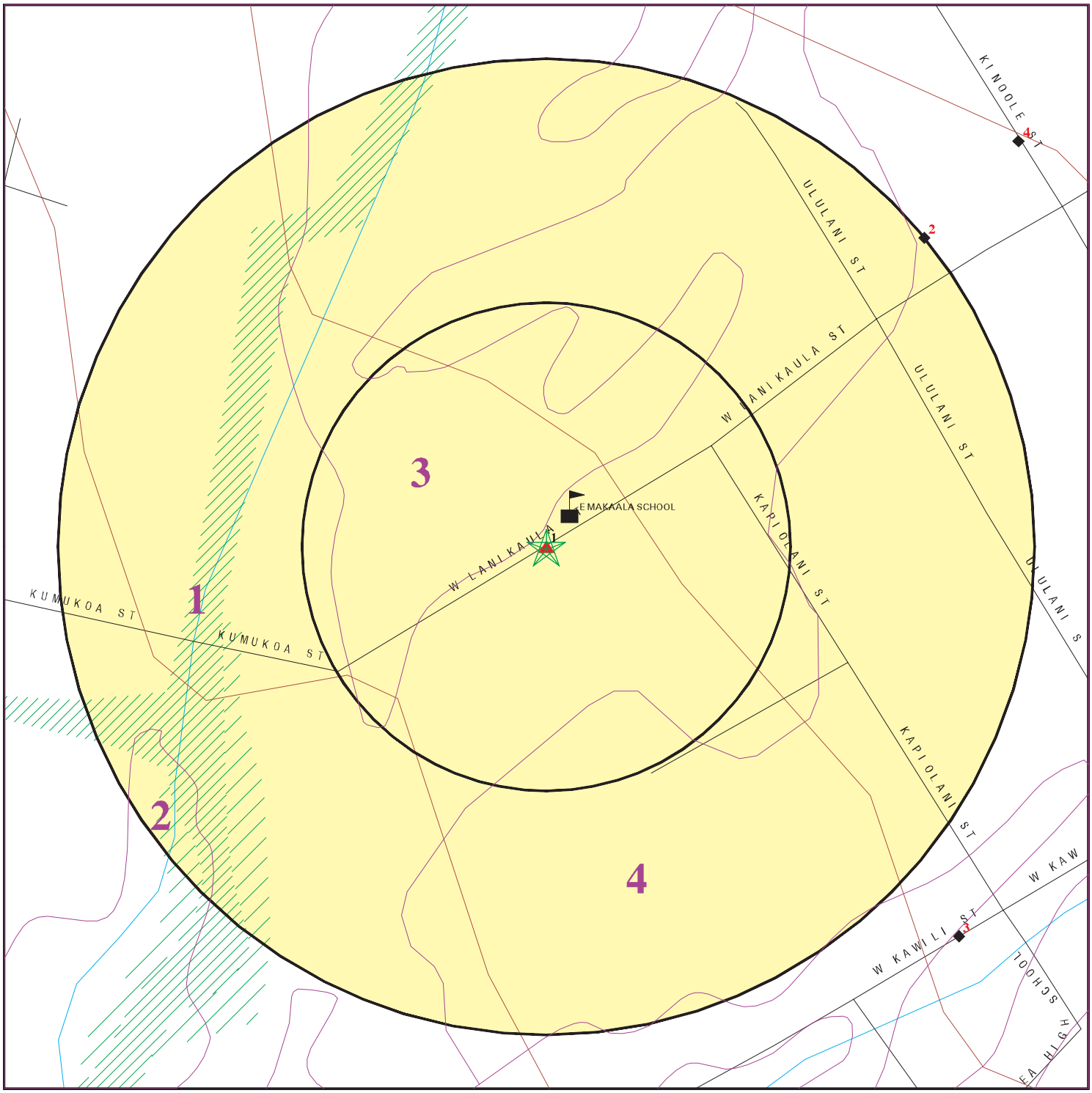
DETAIL MAP - 01714247.2r



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: SFC Minoru Kunieda USARC	CLIENT: CH2M Hill
ADDRESS: 470 W. LANIKAULA ST HILO HI 96720	CONTACT: Mary Beth Jacques INQUIRY #: 01714247.2r
LAT/LONG: 19.7036 / 155.0808	DATE: July 12, 2006

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
SHWS		1.000	0	0	2	8	NR	10
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	2	NR	NR	2
UST		0.250	0	0	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		TP	NR	NR	NR	NR	NR	0
EDR Historical Cleaners		TP	NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
1 Target Property	**KUNIEDA US ARMY RESERVE CTR 470 WEST LANIKAULA ST HILO, HI 96720**	**FINDS**	**1008002961 110020725054**

Actual: 119 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

---

2 NE 1/4-1/2 1320 ft.	**A PERSONAL TOUCH DRY CLEANING 1472 KILAUEA AVE STE 4 HILO, HI 96720**	**RCRA-SQG FINDS HAZNET**	**1000860480 HID984470161**

Relative: Lower

Actual: 63 ft.

RCRAInfo:

Owner:	WAYNE KANESHIRO (808) 959-5848
EPA ID:	HID984470161
Contact:	SUYA SAKANE (808) 934-8788
Classification:	Small Quantity Generator
TSDF Activities:	Not reported
Violation Status:	No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	HID984470161
TSD EPA ID:	Not reported
Gen County:	Not reported
Tsd County:	Kings
Tons:	0.15
Facility Address 2:	Not reported
Waste Category:	
Disposal Method:	Disposal, Other
Contact:	SAKANE, SUYA
Telephone:	(808) 934-8788
Mailing Name:	Not reported
Mailing Address:	2159 KINOOLE ST HILO, HI 96720
County	Not reported

Gepaid:	HID984470161
TSD EPA ID:	Not reported
Gen County:	Not reported
Tsd County:	Kings
Tons:	0.78
Facility Address 2:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Contact:	SAKANE, SUYA
Telephone:	(808) 934-8788
Mailing Name:	Not reported

A PERSONAL TOUCH DRY CLEANING (Continued) **1000860480**

Mailing Address: 2159 KINOOLE ST
HILO, HI 96720
County Not reported

Gepaid: HID984470161
TSD EPA ID: CAT000646117
Gen County: 99
Tsd County: 99
Tons: 0.2
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: SAKANE, SUYA
Telephone: (808) 934-8788
Mailing Name: Not reported
Mailing Address: 2159 KINOOLE ST
HILO, HI 96720
County 99

Gepaid: HID984470161
TSD EPA ID: Not reported
Gen County: Not reported
Tsd County: Kings
Tons: 0.62
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: SAKANE, SUYA
Telephone: (808) 934-8788
Mailing Name: Not reported
Mailing Address: 2159 KINOOLE ST
HILO, HI 96720
County Not reported

3
SE
1/4-1/2
1535 ft.

Relative:
Lower

Actual:
94 ft.

UNIVERSITY OF HAWAII AT HILO **RCRA-SQG** **1000431693**
200 W KAWILI ST **SHWS** **HID982523185**
HILO, HI 96720 **FINDS**
LUST
SPILLS

RCRAInfo:
Owner: STATE OF HAWAII
(415) 555-1212
EPA ID: HID982523185

Contact: EDWARD KATAHIRA
(808) 933-3333

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 262.10-12.A
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 07/13/1998
Actual Date Achieved Compliance: 02/10/1999

There are 1 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19990210

UNIVERSITY OF HAWAII AT HILO (Continued) **1000431693**

FINDS:

Other Pertinent Environmental Activity Identified at Site:

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:

File Under:	State of Hawaii, University of Hawaii
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	University of Hawaii-Hilo Auto Shop
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	State Site
Sitelist Name:	University of Hawaii-Hilo Auto Shop
Activity Type:	Screening
Assignment Date:	2004-05-20 00:00:00
Activity Lead:	Steve Mow
Assignment End Date:	Not reported
End fill:	2005-08-24 00:00:00
Result fill:	Ongoing
Overall Status:	Ongoing

LUST:

Facility ID:	9-603380
Release ID:	980134
Facility Status Date:	1999-08-03 00:00:00
Facility Status:	Site Cleanup Completed
Project Officer:	Takaba

Facility ID:	9-603380
Release ID:	990202
Facility Status Date:	2000-04-04 00:00:00
Facility Status:	Site Cleanup Completed
Project Officer:	Takaba

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	20030602-1513
Units:	Petroleum Contaminated Soil
Substances:	Petroleum in soil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Assignment Date:	2003-06-02 00:00:00
Activity Lead:	Terry Corpus
Assignment End Date:	2004-11-04 00:00:00

UNIVERSITY OF HAWAII AT HILO (Continued) **1000431693**

Result: 8
Incident: Petroleulm contaminated soil discovered, 4/22/03, during excavation work at UH, adjacent to auto shop. Amount and source unknown.
Initial: Petroleulm contaminated soil discovered, 4/22/03, during excavation work at UH, adjacent to auto shop. Amount and source unknown.
Report: Petroleulm contaminated soil discovered, 4/22/03, during excavation work at UH, adjacent to auto shop. Amount and source unknown.

4
NE
1/4-1/2
1683 ft.

HILO RADIATOR & GLASS **FINDS** **1006842165**
1335 KINOOLE ST **LUST** **110014035766**
HILO, HI 96720

Relative:
Lower

Actual:
52 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

LUST:
Facility ID: 9-600152
Release ID: 920063
Facility Status Date: 1995-10-27 00:00:00
Facility Status: Site Cleanup Completed
Project Officer: Brewer

5
East
1/4-1/2
2635 ft.

USDA FOREST SERVICE PSW EXPERIMENTAL STATION **SHWS** **1006819479**
1643 KILAUEA AVE **FINDS** **110013772845**
HILO, HI 96720

Relative:
Lower

Actual:
46 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

SHWS:
File Under: United States, Department of Agriculture, Forest Service
Supplement: PSW Experimental Station
Restricted Use: Not reported
Restricted Use Comm: Not reported
Ic Relied On In Remedy: Not reported
Unit: USDA Forest Service PSW Experimental Station
Fed Id: HI0122390008
Funding: Not reported
Agreement/program: Not reported
Sitelist Name: USDA Forest Service PSW Experimental Station
Activity Type: ISST
Assignment Date: 1996-04-14 00:00:00
Activity Lead: Unknown
Assignment End Date: 1996-04-15 00:00:00
End fill: 1996-04-15 00:00:00
Result fill: NFA
Overall Status: SDAR NFA

6 NNE 1/2-1 2931 ft. | **HILO SHOPPING CENTER**
1255 KILAUEA AVE
HILO, HI 96720 | **SHWS** | **S106817730**
SPILLS | **N/A**

Relative: Lower

Actual: 35 ft.

SHWS:

File Under:	Hilo Shopping Center
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Hilo Shopping Center
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	State Site
Sitelist Name:	Hilo Shopping Center
Activity Type:	Screening
Assignment Date:	2004-10-29 00:00:00
Activity Lead:	Unassigned
Assignment End Date:	Not reported
End fill:	2005-08-24 00:00:00
Result fill:	Ongoing
Overall Status:	Ongoing

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	20040510-1040
Units:	Hilo Shopping Center non-regulated UST release
Substances:	Diesel Fuel
Less Or Greater Than:	<
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Assignment Date:	2004-05-10 00:00:00
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	8
Incident:	Removal of non-regulated UST. Source may be from an old laundromat. Samples taken below the tank indicate 23, 24, and 56 ppm of diesel
Initial:	Notification only
Report:	Point-of Contacts: Charlotte P. Cainglit; R.S. M. Inc. c/o Hilo Shopping Center, Suite 360 Tel no 961-5255 and Fax 935-8099 Duncan Walker (808) 966-7481, P.O. Box 4998, Hilo, HI 96720

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7 North 1/2-1 3303 ft. | **SUN SUN LAU CHOP SUEY HOUSE**
1055 KINOOLE ST
HILO, HI 96720 | **SHWS** | **S106820539**
SPILLS | **N/A**

Relative: Lower

Actual: 43 ft.

SHWS:

File Under:	Sun Sun Lau Chop Suey House
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Sun Sun Lau Chop Suey House (Report)
Fed Id:	Not reported
Funding:	ERRF

SUN SUN LAU CHOP SUEY HOUSE (Continued) **S106820539**

Agreement/program:	State Site
Sitelist Name:	Sun Sun Lau Chop Suey House (Report)
Activity Type:	Remedial
Assignment Date:	1997-01-30 00:00:00
Activity Lead:	Mark Sutterfield
Assignment End Date:	2005-04-28 00:00:00
End fill:	2005-04-28 00:00:00
Result fill:	No Further Action (NFA)-Cleanup Goals Achieved (Removal)
Overall Status:	SDAR NFA

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	19951212-2
Units:	Sun Sun Lau, Ltd.
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	150
Units:	Gallons
Activity Type:	Response
Assignment Date:	Not reported
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	8
Incident:	Leakage from an exempt UST that supplied fuel for onsite use in hot water heaters.
Initial:	Removed the UST's and over excavated the diesel-impacted soil. The excavated, diesel-impacted soil has been temporarily stockpiled onsite and will be aerated onsite and disposed of properly. Walker Consultants recovered as much diesel as possible.
Report:	Removed the UST's and over excavated the diesel-impacted soil. The excavated, diesel-impacted soil has been temporarily stockpiled onsite and will be aerated onsite and disposed of properly. Walker Consultants recovered as much diesel as possible.

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8 **EXEMPT UST CLOSURE AT EXCELSIOR DAIRY** **SHWS** **1006820203**
NE **458 KEKUANAOA ST** **FINDS** **110013781201**
1/2-1 **HILO, HI 96720** **SPILLS**
4224 ft.

Relative: Lower

Actual: 20 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

SHWS:

File Under:	Excelsior Dairy, Inc.
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Exempt UST Closure at Excelsior Dairy
Fed Id:	Not reported

EXEMPT UST CLOSURE AT EXCELSIOR DAIRY (Continued) **1006820203**

Funding: Not reported
Agreement/program: Not reported
Sitelist Name: Exempt UST Closure at Excelsior Dairy
Activity Type: Unregulated UST
Assignment Date: 2004-10-26 00:00:00
Activity Lead: John Peard
Assignment End Date: Not reported
End fill: 2005-08-24 00:00:00
Result fill: Ongoing
Overall Status: Ongoing

HI SPILLS:
Island: Hawaii
Supplemental Loc. Text: Not reported
Case Number: 19991112-1052
Units: Exempt UST Closure @ Excelsior Dairy
Substances: Diesel Fuel
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Assignment Date: 1999-11-12 00:00:00
Activity Lead: Bill Perry
Assignment End Date: Not reported
Result: 8
Incident: The HEERO received written notification on 11/12/99, no verbal notification before, about UST removal.
Initial: RP response.
Report: RP response.

9
North
1/2-1
4346 ft.

Relative:
Lower

Actual:
63 ft.

HILO QUALITY CLEANERS **RCRA-SQG** **1004688848**
865 KINOOLE ST **SHWS** **HID982436487**
HILO, HI 96720 **FINDS**
LUST
SPILLS

RCRAInfo:
Owner: HILO QUALITY CLEANERS
(415) 555-1212
EPA ID: HID982436487

Contact: RONALD JOHNSON
(808) 935-1620

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

HILO QUALITY CLEANERS (Continued) **1004688848**

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

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SHWS:

File Under:	Hilo Quality Cleaners
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Hilo Quality Cleaners
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	Not reported
Sitelist Name:	Hilo Quality Cleaners
Activity Type:	ISST
Assignment Date:	1996-12-01 00:00:00
Activity Lead:	Unknown
Assignment End Date:	1996-12-02 00:00:00
End fill:	1996-12-02 00:00:00
Result fill:	NFA
Overall Status:	SDAR NFA

LUST:

Facility ID:	9-601694
Release ID:	900075
Facility Status Date:	2002-04-10 00:00:00
Facility Status:	Site Cleanup Completed
Project Officer:	Ruiz

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	19950111
Units:	Hilo Quality Cleaners tank removal
Substances:	Diesel #6 Bunker
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Assignment Date:	Not reported
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	8
Incident:	7,000 Gal UST removal.UST removal found oil impacted soils.Pump failure caused the release of diesel from an above ground storage tank.
Initial:	7,000 Gal UST removal.noneApplied sorbents and boom to contain and control the spill.
Report:	7,000 Gal UST removal.nonePump shut off equipment failed. The equipment was repaired cleanup operations were completed by the responsible party contractors.

Island: Hawaii

HILO QUALITY CLEANERS (Continued) **1004688848**

Supplemental Loc. Text: Not reported
Case Number: 19940111
Units: Hilo Quality Cleaners oil impacted soils
Substances: diesel #6 bunker
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Assignment Date: Not reported
Activity Lead: Terry Corpus
Assignment End Date: Not reported
Result: 8
Incident: 7,000 Gal UST removal.UST removal found oil impacted soils.Pump failure caused the release of diesel from an above ground storage tank.
Initial: 7,000 Gal UST removal.noneApplied sorbents and boom to contain and control the spill.
Report: 7,000 Gal UST removal.nonePump shut off equipment failed. The equipment was repaired cleanup operations were completed by the responsible party contractors.

Island: Hawaii
Supplemental Loc. Text: Not reported
Case Number: 19971018-1909
Units: Hilo Quality Cleaners Diesel Spill
Substances: Diesel Fuel
Less Or Greater Than: Not reported
Numerical Quantity: 30
Units: Gallons
Activity Type: Response
Assignment Date: 1997-10-08 00:00:00
Activity Lead: Bill Perry
Assignment End Date: Not reported
Result: 8
Incident: 7,000 Gal UST removal.UST removal found oil impacted soils.Pump failure caused the release of diesel from an above ground storage tank.
Initial: 7,000 Gal UST removal.noneApplied sorbents and boom to contain and control the spill.
Report: 7,000 Gal UST removal.nonePump shut off equipment failed. The equipment was repaired cleanup operations were completed by the responsible party contractors.

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10 North 1/2-1 4373 ft. | **HILO QUALITY WASHERETTE** | **SHWS** | **1006820674**
210 HOKU ST | **FINDS** | **110013786741**
HILO, HI 96720 | **SPILLS**

Relative: Lower

Actual: 56 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

SHWS:
File Under: Hilo Quality Washerette
Supplement: Not reported
Restricted Use: Not reported

HILO QUALITY WASHERETTE (Continued) **1006820674**

Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Hilo Quality Washerette
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	State Site
Sitelist Name:	Hilo Quality Washerette
Activity Type:	Remedial
Assignment Date:	2005-04-13 00:00:00
Activity Lead:	Eric Sadoyama
Assignment End Date:	Not reported
End fill:	2005-08-24 00:00:00
Result fill:	Ongoing
Overall Status:	Ongoing

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	19960110-1425
Units:	Hilo Quality Washerette oil tank leaking diesel #2
Substances:	Diesel Fuel #2
Less Or Greater Than:	Not reported
Numerical Quantity:	200
Units:	Gallons
Activity Type:	Response
Assignment Date:	1996-01-10 00:00:00
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	8
Incident:	Routine fuel-level check of UST indicated a large loss of diesel.Discovered heating oil tank was leaking after delivery.
Initial:	Tank emptied on 12/12/95 removed and sealed. Removing soil at approximately 25 feet.Hawaii County Fire Department
Report:	Official notification requiring written followup.Hawaii County Fire Department

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	19960124-0225
Units:	Hilo Quality Washerette tank leaking diesel
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	200
Units:	Gallons
Activity Type:	Response
Assignment Date:	1996-01-24 00:00:00
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	8
Incident:	Routine fuel-level check of UST indicated a large loss of diesel.Discovered heating oil tank was leaking after delivery.
Initial:	Tank emptied on 12/12/95 removed and sealed. Removing soil at approximately 25 feet.Hawaii County Fire Department
Report:	Official notification requiring written followup.Hawaii County Fire Department

11 East 1/2-1 4375 ft. | **HILO SODA WORKS**
270 E KAWILI ST
HILO, HI 96720 | **SHWS LUST UST** | **U003155315 N/A**

Relative: Lower

Actual: 46 ft.

SHWS:

File Under:	Hilo Soda Works (Former)
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Hilo Soda Works Tank Closure
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	Not reported
Sitelist Name:	Hilo Soda Works Tank Closure
Activity Type:	ISST
Assignment Date:	1997-07-14 00:00:00
Activity Lead:	Unknown
Assignment End Date:	1997-07-15 00:00:00
End fill:	1997-07-15 00:00:00
Result fill:	NFA
Overall Status:	SDAR NFA

LUST:

Facility ID:	9-603256
Release ID:	970025
Facility Status Date:	1997-07-31 00:00:00
Facility Status:	Site Cleanup Completed
Project Officer:	Ruiz

UST:

Facility ID:	9-603256
Owner:	HILO SODA WORKS
Owner Address:	145 KEOULA ST
Ownder City,St,Zip:	Hilo, 96720 96720
Tank ID:	R-2
Installed:	1/1/1964
Tank Status:	**Permanently Out of Use**
Date Closed:	12/4/1996
Tank Capacity:	550
Substance:	Gasoline

Facility ID:	9-603256
Owner:	HILO SODA WORKS
Owner Address:	145 KEOULA ST
Ownder City,St,Zip:	Hilo, 96720 96720
Tank ID:	R-1
Installed:	1/1/1970
Tank Status:	**Permanently Out of Use**
Date Closed:	12/4/1996
Tank Capacity:	550
Substance:	Diesel

12 NNE 1/2-1 4392 ft. | **LARRY'S KAIKOO CHEVRON**
835 KILAUEA AVE
HILO, HI 96720

SHWS **S106818739**
SPILLS **N/A**
INST CONTROL

Relative: Lower

Actual: 5 ft.

SHWS:

File Under:	Chevron Products Company
Supplement:	Not reported
Restricted Use:	This site is available for unrestricted use.
Restricted Use Comm:	Soil and groundwater below Tier I.
Ic Relied On In Remedy:	Not reported
Unit:	Larry's Kaikoo Chevron
Fed Id:	Not reported
Funding:	ERRF
Agreement/program:	State Site
Sitelist Name:	Larry's Kaikoo Chevron
Activity Type:	Removal
Assignment Date:	2004-05-10 00:00:00
Activity Lead:	Mark Sutterfield
Assignment End Date:	2004-06-30 00:00:00
End fill:	2004-06-30 00:00:00
Result fill:	No Further Action (NFA)-Cleanup Goals Achieved
Overall Status:	SDAR NFA

HI INSTUTIONAL CONTROL:

Restricted Use:	This site is available for unrestricted use.
Comments on Restricted Use:	Soil and groundwater below Tier I.
IC Relied on in Remedy:	Not reported
File Under:	Chevron Products Company

HI SPILLS:

Island:	Hawaii
Supplemental Loc. Text:	Not reported
Case Number:	20030916-1500
Units:	UST Closure work UST FAC ID 9-601136
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Assignment Date:	2003-09-16 00:00:00
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	8
Incident:	UST closure work, 2 sand and grease traps-sample #SG-2N TPH 1,610 mg/kg. Cesspool sheen on water. Hydraulic hoist-motor oil TPH 300 mg/kg @ 8.5 ft on soil.
Initial:	Notification only. Phone number 522-0327.
Report:	Notification only. Phone number 522-0327.

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
13 **East** **1/2-1** **5045 ft.**	**HILO MECHANICAL, INC** **50 HOLOMUA ST** **HILO, HI 96720**	**SHWS** **FINDS**	**1006820676** **110013786778**

Relative:
Lower

Actual:
57 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

SHWS:

File Under:	Hilo Mechanical, Inc.
Supplement:	Not reported
Restricted Use:	Not reported
Restricted Use Comm:	Not reported
Ic Relied On In Remedy:	Not reported
Unit:	Hilo Mechanical, Inc.
Fed Id:	Not reported
Funding:	Not reported
Agreement/program:	Not reported
Sitelist Name:	Hilo Mechanical, Inc.
Activity Type:	ISST
Assignment Date:	1995-03-22 00:00:00
Activity Lead:	Unknown
Assignment End Date:	1995-03-23 00:00:00
End fill:	1995-03-23 00:00:00
Result fill:	NFA
Overall Status:	SDAR NFA

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HILO	1000860450	KULANI CORRECTIONAL FACILITY	HC 1 STAINBACK HIGHWAY	96720	FINDS, RCRA-LQG
HILO	1000707625	POHAKULOA TRAINING AREA	BLDG. 36, SADDLE RD HWY 200, 36 M MARKER	96720	CERCLIS
HILO	S106816095	ALAMO RENT A CAR, HILO INTERNATIONAL AIRPORT	131 KEKUANAOA PL	96720	SHWS, SPILLS
HILO	S107022566	HILO JUDICIARY CENTER PROJECT	KILAUEA AVE		SHWS, INST CONTROL
HILO	S106818659	LAEHALA STREET DRUM SITE	LAEHALA ST	96720	SHWS, SPILLS
HILO	1006843120	YAMADA TRANSFER, INC.	573 LANIKAULA ST	96720	FINDS, LUST
HILO	S106817696	HILO ARSENIC	33B LILIOUKALANI LA	96720	SHWS, SPILLS
HILO	1008169490	KUNIEDA US ARMY RESERVE CTR	MAUNALOA HWY	96720	FINDS
HILO	1007117493	HILO BURRITO	PONAHAWAI ST AND KAMEHAMEHA AVE		CERCLIS
HILO	1001112098	USARMY POHAKULOA TRAINING AREA	36 SADDLE RD HWY 200 MI MKR 36	96720	RCRA-SQG, FINDS
HILO	S106820075	POHAKULOA TRAINING AREA	SADDLE RD	96720	SHWS, SPILLS
HILO	1000141640	USDA ARS	STAINBACK HWY	96720	RCRA-SQG, FINDS
SOUTH HILO, HAWAII	S106401333	SOUTH HILO LANDFILL	SOUTH HILO	96720	SWF/LF

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/23/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/21/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/09/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 04/26/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/14/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/26/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/13/2006
Date Data Arrived at EDR: 04/28/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 32

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/06/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/21/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/12/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/29/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 03/31/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 05/11/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/13/2006
Date Data Arrived at EDR: 04/21/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/12/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 03/29/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 62

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/27/2006
Date Data Arrived at EDR: 05/02/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 28

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/30/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 08/24/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/28/2005
Number of Days to Update: 30

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Semi-Annually

SWF/LF: Permitted Landfills in the State of Hawaii

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/19/2004
Date Data Arrived at EDR: 05/20/2004
Date Made Active in Reports: 06/22/2004
Number of Days to Update: 33

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 02/20/2006
Date Made Active in Reports: 03/20/2006
Number of Days to Update: 28

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 02/20/2006
Date Made Active in Reports: 03/24/2006
Number of Days to Update: 32

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 08/24/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/28/2005
Number of Days to Update: 30

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls
Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 08/24/2005
Date Data Arrived at EDR: 10/12/2005
Date Made Active in Reports: 10/26/2005
Number of Days to Update: 14

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 07/07/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

VCP: Voluntary Response Program Sites

Date of Government Version: 08/24/2005
Date Data Arrived at EDR: 10/31/2005
Date Made Active in Reports: 12/14/2005
Number of Days to Update: 44

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 07/07/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 05/26/2006
Date Data Arrived at EDR: 05/26/2006
Date Made Active in Reports: 07/10/2006
Number of Days to Update: 45

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 05/26/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Varies

BROWNFIELDS: Brownfields Sites

Date of Government Version: 08/24/2005
Date Data Arrived at EDR: 10/12/2005
Date Made Active in Reports: 10/26/2005
Number of Days to Update: 14

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 07/07/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 05/25/2006
Date Data Arrived at EDR: 05/26/2006
Date Made Active in Reports: 07/10/2006
Number of Days to Update: 45

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 05/03/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SFC MINORU KUNIEDA USARC
470 W. LANIKAULA ST
HILO, HI 96720

TARGET PROPERTY COORDINATES

Latitude (North):	19.70360 - 19˚ 42' 13.0''
Longitude (West):	155.0808 - 155˚ 4' 50.9''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	281892.3
UTM Y (Meters):	2179888.0
Elevation:	118 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	19155-F1 HILO, HI
Most Recent Revision:	Not reported

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

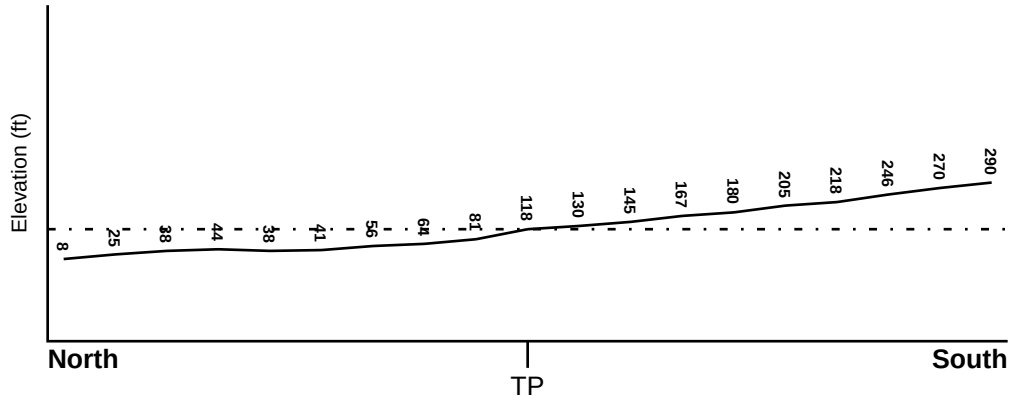
TOPOGRAPHIC INFORMATION

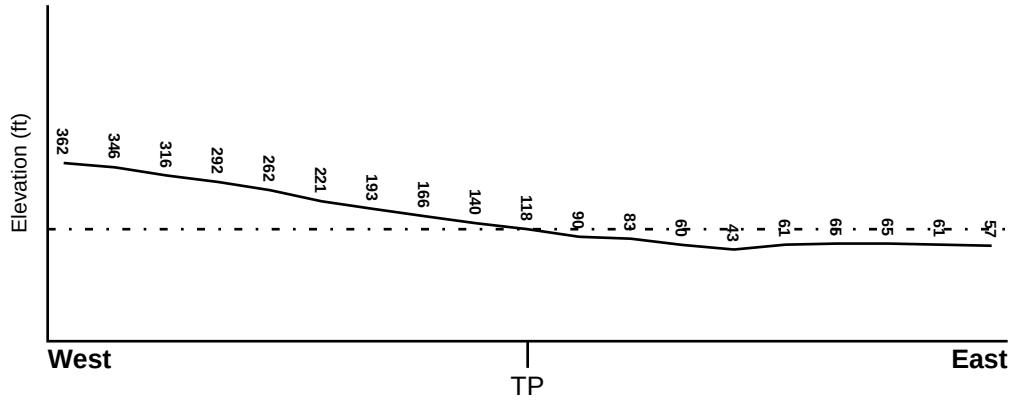
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 118 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
HAWAII, HI	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 1551660880C

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HILO	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

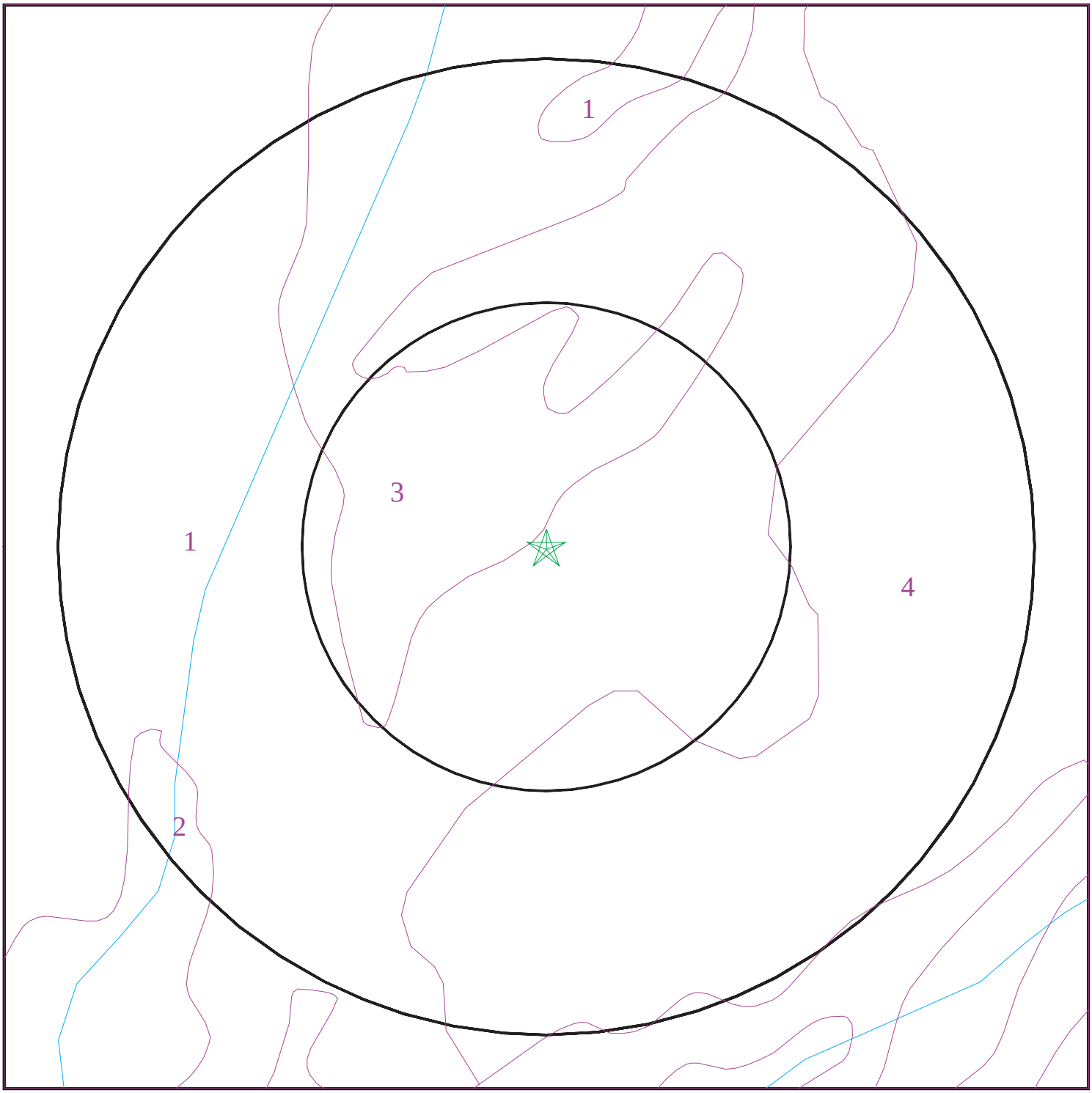
Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 01714247.2r



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	SFC Minoru Kunieda USARC	CLIENT:	CH2M Hill
ADDRESS:	470 W. LANIKAULA ST HILO HI 96720	CONTACT:	Mary Beth Jacques
		INQUIRY #:	01714247.2r
LAT/LONG:	19.7036 / 155.0808	DATE:	July 12, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: KEAUKAHA

Soil Surface Texture: muck

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 3 inches

Depth to Bedrock Max: > 10 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	8 inches	muck	A-8	Highly organic soils, Peat.	Max: 20.00 Min: 6.00	Max: 6.00 Min: 5.10
2	8 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.00	Max: 0.00 Min: 0.00

Soil Map ID: 2

Soil Component Name: PANAEWA

Soil Surface Texture: gravelly - silty clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 15 inches

Depth to Bedrock Max: > 20 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	12 inches	gravelly - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Thixotropic suffix for OH.	Max: 20.00 Min: 6.00	Max: 6.00 Min: 5.10
2	12 inches	16 inches	very cobbly - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Thixotropic suffix for OH.	Max: 20.00 Min: 6.00	Max: 6.00 Min: 5.10
3	16 inches	26 inches	unweathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.00	Max: 0.00 Min: 0.00

Soil Map ID: 3

Soil Component Name: PAPAI

Soil Surface Texture: extremely stony - muck

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 40 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	8 inches	extremely stony - muck	A-8	Highly organic soils, Peat.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 6.10
2	8 inches	60 inches	fragmental material	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 20.00 Min: 20.00	Max: 7.30 Min: 6.10

Soil Map ID: 4

Soil Component Name: OLAA

Soil Surface Texture: extremely stony - silty clay loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 40 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	16 inches	extremely stony - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Thixotropic suffix for OH.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 5.60

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
2	16 inches	25 inches	extremely stony - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Thixotropic suffix for OH.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 5.60
3	25 inches	35 inches	fragmental material	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 20.00 Min: 20.00	Max: 6.50 Min: 5.60

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	8-4204-001	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 01714247.2r

County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME: SFC Minoru Kunieda USARC ADDRESS: 470 W. LANIKAULA ST HILO HI 96720 LAT/LONG: 19.7036 / 155.0808	CLIENT: CH2M Hill CONTACT: Mary Beth Jacques INQUIRY #: 01714247.2r DATE: July 12, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 **NE** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**8-4204-001**

Wid:	8-4204-001	Island Code:	8
Island Name:	Hawaii	Well no:	4204-01
Well name:	Waiakea Village	Old name:	Not Reported
Yr drilled:	1971	Driller:	ROSCOE MOSS
Quad_map:	67	Latitude:	194258
Longitude:	1550434	UTM:	Y
Gps:	N	Owner/user:	Hawn Rsrt Vill
Old number:	Not Reported	Well_type:	PER
Type:	Percussion Drill	Casing dia:	14
Ground Elev:	Not Reported	Well depth:	35
Solid casing Depth:	25	Perf casing Depth:	35
Use:	IND	Use Desc:	Industrial
Use year:	73	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	1250	Drop in water Lvl:	2.4
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	700
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QKL	Geology desc:	Koloa volcanics (Kauai rejuvenated eruption) lava flows
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	521
Pump Capacity:	1.008	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	80401
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	08/06/1971 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HAWAII County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 96720

Number of sites tested: 43

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	-0.112 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	-0.106 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Ground Water Wells
Source: Department of Land and Natural Resources
Telephone: 808-587-0242

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Fax To: CH2M Hill
Contact: Mary Beth Jacques
Fax : 404-229-9152
Date: 07/12/2006

Fax From: Bart Sobieralski
EDR
Phone: 1-800-352-0050

EDR PUR-IQ® Report

"the intelligent way to conduct historical research"

for
SFC Minoru Kunieda USARC
470 W. LANIKAULA ST
HILO, HI 96720
Lat./Long. 19.70360 / 155.08080
EDR Inquiry # 01714247.2r

The EDR PUR-IQ report facilitates historical research planning required to complete the Phase I ESA process. The report identifies the *likelihood* of prior use coverage by searching proprietary EDR-Prior Use Reports® comprising nationwide information on: city directories, fire insurance maps, aerial photographs, historical topographic maps, flood maps and National Wetland Inventory maps.

Potential for EDR Historical (Prior Use) Coverage - Coverage in the following historical information sources may be used as a guide to develop your historical research strategy:

1. City Directory: Coverage may exist for portions of Hawaii County, HI.

2. Fire Insurance Map: When you order online any EDR Package or the EDR Radius Map with EDR Sanborn Map Search/Print, you receive site specific Sanborn Map coverage information at no charge.

3. Aerial Photograph: Aerial photography coverage may exist for portions of Hawaii County. Please contact your EDR Account Executive for information about USGS photos available through EDR.

4. Topographic Map: The USGS 7.5 min. quad topo sheet(s) associated with this site:

Historical: Coverage exists for Hawaii County

Current: Target Property: TP | | 19155-F1 Hilo, HI

EDR's network of professional researchers, located throughout the United States, accesses the most extensive national collections of city directory, fire insurance maps, aerial photographs and historical topographic map resources available for HILO, HI. These collections may be located in multiple libraries throughout the country. To ensure maximum coverage, EDR will often assign researchers at these multiple locations on your behalf. Please call or fax your EDR representative to authorize a search.

EDR™ Environmental Data Resources Inc

EDR - HISTORICAL SOURCE(S) ORDER FORM

CH2M Hill
Mary Beth Jacques
Account # 1592163

SFC Minoru Kunieda USARC
470 W. LANIKAULA ST
HILO, HI 96720
Hawaii County
Lat./Long. 19.70360 / 155.08080
EDR Inquiry # 01714247.2r

Should you wish to change or add to your order, fax this form to your EDR account executive:

Bart Sobieralski
Ph: 1-800-352-0050 Fax: 1-800-231-6802

Reports

___ EDR Sanborn Map® Search/Print

___ EDR Fire Insurance Map Abstract

___ EDR Multi-Tenant Retail Facility® Report

___ EDR City Directory Abstract

___ EDR Aerial Photo Decade Package

___ USGS Aerial 5 Package

___ USGS Aerial 3 Package

___ EDR Historical Topographic Maps

___ Paper Current USGS Topo (7.5 min.)

___ Environmental Lien Search

___ Chain of Title Search

___ NJ MacRaes Industrial Directory Report

___ EDR Telephone Interview

Shipping:

___ Email
___ Express, Next Day Delivery — RUSH SERVICE IS AVAILABLE
___ Express, Second Day Delivery
___ Express, Next day Delivery — Customer Account — Acct # _____
___ Express, Second Day Delivery — Customer Account — Acct # _____
___ U.S. Mail

Thank you

The EDR Aerial Photo Decade Package

SFC Minoru Kunieda USARC
470 W. LANIKAULA ST
HILO, HI 96720

Inquiry Number: 1714247.5

July 12, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

This document reports that EDR searched its own collection or select outside repository collections of aerial photography, and based on client-supplied target property information, aerial photography, including the target property was not deemed reasonably ascertainable by Environmental Data Resources, Inc. (EDR). This no coverage determination reflects a search only of aerial photography repository collections that EDR accessed. It can not be concluded from this search that no coverage for the target property exists anywhere, in any collection.

NO COVERAGE

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To:	Mary Beth Jacques	**Order Date:**	7/12/2006 **Completion Date:** 7/13/2006
	CH2M Hill	**Inquiry #:**	1714247.3s
	1569 Stampmill Way	**P.O. #:**	NA
	Lawrenceville, GA 30043	**Site Name:**	SFC Minoru Kunieda USARC
		Address:	470 W. LANIKAULA ST
Customer Project:	NA	**City/State:**	HILO, HI 96720
1592163BAS	770-338-1589	**Cross Streets:**	

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

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The EDR-City Directory
Abstract

SFC Minoru Kunieda USARC
470 W. LANIKAULA ST
HILO, HI 96720

Inquiry Number: 1714247.6

Monday, July 17, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
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EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1996 through 2006. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

Date EDR Searched Historical Sources: July 17, 2006

Target Property:
470 W. LANIKAULA ST
HILO, HI 96720

Year	***Uses***	***Source***
1996	US Army Reserve	Polk's City Directory
2002	US Army Reserve	Polk's City Directory
2006	US Army Reserve	Polk's City Directory

Adjoining Properties

SURROUNDING

Multiple Addresses
HILO, HI 96720

Year	***Uses***	***Source***
1996	****W LANIKAULA ST****	Polk's City Directory
	YMCA (Waiakea Settlement) (300)	Polk's City Directory
	Church Of The Holy Cross (440)	Polk's City Directory
	E'Makaala School (440)	Polk's City Directory
	Reverend Lon Rycraft (460)	Polk's City Directory
	U Of H (Beaumont Agrl Rsch Ctr) (461)	Polk's City Directory
	Hale "I" Kena U Of H Dormitory (521)	Polk's City Directory
	Hale Kauanoe U Of H Dormitory (525)	Polk's City Directory
	Address not listed in research source (535)	Polk's City Directory
2002	****W LANIKAULA ST****	Polk's City Directory
	YMCA (300)	Polk's City Directory
	E'Makaala School (440)	Polk's City Directory
	Church Of The Holy Cross (460)	Polk's City Directory

Year	***Uses***	***Source***
2002	Apts (521)	Polk's City Directory
	Residence (525)	Polk's City Directory
	Residence (535)	Polk's City Directory
2006	****W LANIKAULA ST****	Polk's City Directory
	YMCA (300)	Polk's City Directory
	Church Of The Holy Cross (440)	Polk's City Directory
	E'Makaala School (440)	Polk's City Directory
	Apts (521)	Polk's City Directory
	Residence (525)	Polk's City Directory
	No other addresses 300-599	Polk's City Directory