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**ANDERSEN AFB  
GUAM**

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**ADMINISTRATIVE RECORD  
COVER SHEET**

AR File Number 479

**ACTION MEMORANDUM****1.0 Purpose**

The purpose of this action memorandum is to request and document approval of the proposed removal action described herein for Site 31, Chemical Storage Area 4 located at Andersen Air Force Base. This action is requested in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120 and the Federal Facility Agreement, Administrative Docket Number 93-17, entered between the United States Environmental Protection Agency and the United States Air Force. Final signatures were obtained on the agreement document on March 30, 1997.

**2.0 Site Conditions and Background**

The site remedy is classified as non-time critical, and approval for the removal action is requested as soon as possible. A historical overview of the Andersen AFB facility is presented in 2.2.1 of the *Final Basewide Quality Assurance Project Plan for Andersen Air Force Base, Guam*, Revision 2.0, March 1999. A general description of Site 31, Chemical Storage Area 4 in the Northwest Field Operable Unit is presented below. The description of the site is based on historical information provided by the Air Force and the *Final Engineering Evaluation/ Cost Analysis Report for Site 31, Chemical Storage Area 4 for Andersen Air Force Base, Guam*, EA Engineering, Science, and Technology, Inc., June 1999.

**2.1 Site Description****2.1.1 Removal Site Evaluation**

Site 31, Chemical Storage Area 4 was inactive and covered with native vegetation prior to the 1950's. According to the IRP Phase 1 Final Report (ESE, 1985) and the 1986 Resource Conservation and Recovery Act (RCRA) Facility Agreement (RFA), the site may have been used for the surface disposal of waste oils and solvents between 1952 and 1956. The 12-acre site includes a large cleared area in the north half and an abandoned quarry in the southern half. A 35 by 15 by 12 foot septic tank is located in the northern half with a discharge pipe that discharged to the quarry. The tank is a part of the original sanitary sewer pipelines that drained from the housing area at the former Northwest Field housing area. There are no surface water bodies in the vicinity of the site and the depth to ground water is approximately 450 to 500 feet below the land surface.

Field investigations and environmental sampling at Site 31, Chemical Storage Area 4 were performed according to the Work Plan Addendum to Operable Unit 6 for Operable Unit 5, and the Basewide Remedial Investigation/Feasibility Study Standard Operating Procedures (SOP). Fieldwork was conducted between November 1997 and March 1998. The field investigation included a record search, site reconnaissance, detailed site

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inventory, soil sampling, and a topographic survey. A human health risk assessment and an ecological risk assessment were conducted at the site as part of the overall risk assessment.

One surface soil sample collected during December 1997 and March 1998 contained benzo(a)pyrene, exceeding Residential PRGs. The surface soil samples also contained metals including aluminum (1), chromium (2), iron (3), and lead (4), exceeding Residential PRGs and BTVs. Sludge and water samples were collected from the septic tank and showed benzo(a) pyrene above the industrial PRG and benzo(b)fluoranthene above the residential PRG. Subsurface samples were not collected based on the results of the detailed site inventory, the electromagnetic survey, and the soil gas survey. This information confirms the results of the record search, which indicated organic compounds and metals as potential chemicals of concern (COCs). In general, the pathways of exposure for COCs of this target group are incidental ingestion of soil, dermal contact with surface soil, and inhalation of airborne particulates from soil.

The results are provided in the *Final Engineering Evaluation/ Cost Analysis Report for IRP Site 31, Chemical Storage Area 4 for Andersen Air Force Base, Guam*, EA Engineering, Science, and Technology, Inc., June 1999.

### **2.1.2 Physical Location**

Site 31 is located in the northern section of Guam, west of Route 3A, which leads to the Ritidian Wildlife Refuge. The site is one mile northwest of the intersection of Route 3A and Route 3. There are no residential or recreational areas adjacent to the site. There are no wetland communities or surface water bodies in Northwest Field. Although there are areas within Northwest Field protected as critical habitats for several plants and animals, none of the critical habitats are within Site 31.

### **2.1.3 Site Characteristics**

The site is located on an undulating limestone plateau with sinkholes and other karstic features. It is comprised of a limestone quarry that was excavated in the 1950's. Secondary growth vegetation and evidence of excavation delineate the boundaries of the site. Most of the vegetation at the site is mixed secondary growth consisting of ferns, low grasses, small trees, and low vines. As mentioned previously, the site was used for the surface disposal of waste oil and solvents. There are no currently operating facilities on site. The site is currently owned by the United States Air Force. There have been no removal actions conducted at this site to-date.

### **2.1.4 Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

Chemicals of Potential Concerns detected in the heterogeneous wastes stored at Site 31 may have adsorbed onto surface soil particles. COPCs may also have been released into the air as a result of disturbance of affected soils (e.g., by wind and other climatic factors,

or by trespassing activities). The amount of surface soil particulate released into the air is dependent on the soil particle size, the physical properties of the soil, and the level of activity on the soil.

Surface soil, air, and deer and pig meat were identified as potential environmental transport media for the release of chemicals present at Site 31. According to the ecological risk assessment, none of the COPCs posed any potentially adverse environmental risk at Site 31. However, according to human health risk assessment, there are potential adverse health effects for the resident adults and children associated with some metals. Chromium presents a potential cancer risk for resident children and adults and for occasional users/trespassers. Lead and manganese were the COPCs that may have a non-carcinogenic effect to potential resident children who may inadvertently ingest or inhale the impacted soil at the site. These estimates of adverse health effects are conservative and likely to be overestimated.

#### **2.1.5 NPL Status**

The USEPA placed Andersen AFB on the National Priorities List (NPL) on October 14, 1992 because of the potential for groundwater contamination. A Federal Facility Agreement (FFA) finalized in March 1993 between Andersen AFB, Guam Environmental Protection Agency (GEPA), and EPA provided a framework and schedule for environmental activities and requires the Air Force to retain liability and continuous rights of access until environmental cleanups are completed. The Civil Engineer Squadron, Environmental Flight administers the environmental cleanup activities at Andersen AFB. To date, no remedial actions have been conducted at Site 31, Northwest Field Operable Unit.

#### **2.1.6 Maps and Diagrams**

Maps and diagrams presenting the site location and proposed work areas are provided in Attachment 1 to this memorandum.

### **2.2 Other Actions To-Date**

#### **2.2.1 Previous Actions**

Andersen AFB has been keeping the public regularly informed about the progress of the environmental activities through various community relations tools. These tools include the development of a Restoration Advisory Board (RAB), issuing copies of final reports for relevant IRP documents to the Robert F. Kennedy and Nieves M. Flores Memorial Libraries for public use, and the publication of fact sheets and newsletters. The RAB members include a representative from U.S. Congressional Delegate Underwood's office, local legislators, mayors, regulatory agency representatives, and community representatives.

### **2.2.2 Current Actions**

Andersen AFB personnel will continue to communicate with the public regarding the environmental activities currently being planned at Site 31/Northwest Field Operable Unit.

## **2.3 Territorial and Local Authorities Role**

### **2.3.1 Territorial and Local Actions To-Date**

The Resource Conservation and Recovery Act (RCRA) Facility Assessment of Solid Waste Management Units (SWMUs) (SAIC, 1986) included Site 31 as 1 of 63 SWMUs identified on Andersen AFB and the Northwest Field OU. The landfill reportedly operated without any release controls, however, evidence of potentially hazardous releases in the area was not observed and no records of releases were found. It was not known if hazardous wastes were disposed at this landfill. Reportedly, Site 31 was operational from the 1950s through 1963 and was used for sanitary, industrial, and debris disposal.

### **2.3.2 Potential for continued Territorial/Local Response**

GEPA maintains their involvement in all decision making regarding the remedial actions conducted at this site through the review of all work plans and reports and participation on the RAB. GEPA will also maintain involvement by participating in the quarterly Remedial Project Manager (RPM) meetings.

## **3.0 Threats to Public Health, Welfare or the Environment, and Statutory and Regulatory Authorities**

### **3.1 Threats to Public Health or Welfare**

The remedial investigation and risk screening of IRP Site 31, Chemical Storage Area 4 indicated the presence of metals (lead, chromium, and manganese) as site-specific COCs. Chromium concentrations are present at background levels for Site 31.

### **3.2 Threats to the Environment**

Based on a combination of qualitative assessment and quantitative risk characterization, COPC at Site 31-aluminum, antimony, barium, cadmium, chromium, copper, lead, manganese, silver, thallium, vanadium, and zinc- were determined not to pose a risk to ecological receptors.

## **4.0 Endangerment Determination**

Actual or threatened releases of pollutants and contaminants from the site, if not addressed by implementing the response action selected in this Action Memorandum,

may present an imminent and substantial endangerment to public health, or welfare, or the environment.

## **5.0 Proposed Actions**

### **5.1 Proposed Action Description**

The proposed actions at Site 31, Chemical Storage Area 4 are described in the following sections. The removal action activities are based on the information detailed in the documents referenced in Section 2.1.1.

#### **5.1.1 Excavation of Buried Drums/Miscellaneous Containers and Debris**

Asphalt and asphalt containing drums (approximately 64) would be excavated, transported to the asphalt recycling plant (base landfill) and recycled. The three drums with motor oil and/or hydraulic fluid would be properly characterized and disposed.

Drum contents (motor oil and hydraulic fluid) would be sampled and analyzed for the Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics (i.e. the Toxicity Characteristic Leaching Procedure – TCLP), corrosivity, reactivity, and ignitability) to determine if the material should be disposed of at the base landfill or at an off-island hazardous waste landfill. The Andersen AFB landfill does not accept hazardous waste. Impacted soil would be consolidated within Andersen AFB property. Soils determined hazardous waste would be transported to an approved disposal/treatment facility in the mainland. The motor oil and hydraulic fluid would either be disposed of through the DRMO or to an approved waste disposal treatment facility.

The asphalt would be recycled at the processing unit at the active base landfill. Recycled asphalt would be placed in 55-gallon drums for reuse and drum carcasses would be crushed and disposed of in the base landfill. Upon completion of removal/disposal activities, solid decontamination wastes such as personal protective equipment would be disposed of as solid waste at the base landfill.

#### **5.2 Contribution to Remedial Performance**

The proposed removal action is expected to complete the cleanup of Site 31, Chemical Storage Area 4. No further action beyond the removal action is anticipated.

#### **5.3 Applicable or Relevant and Appropriate Requirements**

The removal action at Site 31, Chemical Storage Area 4 will be conducted as part of the Installation Restoration Program (IRP). Requirements of the IRP have been developed and modified to ensure that the Department of Defense (DOD) complies with federal applicable or relevant and appropriate requirements (ARARs) of the Resource Conservation and Recovery Act (RCRA), the National Oil and Hazardous Substances

Pollution Contingency Plan (NCP), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Superfund Amendment and Reauthorization Act (SARA).

#### 5.4 Project Schedule

Initial site preparation work is scheduled to begin on September 6, 1999 with an anticipated completion date of December 31, 1999.

#### 6.0 Outstanding Policy Issues

No outstanding policy issues exist for the proposed removal action at Site 31, Chemical Storage Area 4.

#### 7.0 Enforcement

The removal action at Site 31, Chemical Storage Area 4 is being initiated by the United States Air Force who is identified as the potentially responsible party (PRP). The Air Force is dedicated to performing this removal action in the most prompt and expeditious manner possible.

#### 8.0 Recommendation

This decision document represents the selected removal action for Site 31, Chemical Storage Area 4, Northwest Field Operable Unit, Andersen Air Force Base, Guam, developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended, and not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the administrative record for the site.

  
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 United States Air Force

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 United States Environmental Protection Agency

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