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- ANNEX 2 FORMS AND CHECKLISTS EMERGENCY RESPONSE TRACKING AND NOTIFICATION AND SPCC PROGRAM

## 1. CERTIFICATION

### CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER:

I am familiar with the requirements of the Code of Federal Regulations, Title 40, Part 112 (40 CFR 112). My judgments are based on my examination of each area included in this spill prevention, control and countermeasure plan and on information provided to me by Naval Air Facility El Centro (NAF El Centro) and the individual areas. This information is presumed correct.

This plan has been prepared in accordance with good engineering practice and with the requirements of the 40 CFR 112 (amended March 11, 1996). It is adequate for each area included. Adherence to the plan is the responsibility of NAF El Centro and the individual areas.

Required testing is complete.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Scott LaRaia, P.E.  
Registered Professional Engineer  
Registration No.

## 1.2 APPROVAL BY MANAGEMENT

### **APPROVAL BY MANAGEMENT:**

This plan has the full approval of NAF El Centro management at a level with authority to commit necessary resources.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Capt., U.S. Navy  
Commanding Officer

---

## 2. INTRODUCTION

### 2.1 PURPOSE

This is the master Spill Prevention, Control, and Countermeasure (SPCC) Plan for Naval Air Facility El Centro, CA. (NAF El Centro). It is a consolidation of the SPCC Plans of the areas on the contiguous property of NAF El Centro.

This plan is designed to meet or exceed the SPCC requirements of 40 CFR 112. State and local requirements are identified in Section 2.3. State and local requirements exceeding the requirements of 40 CFR 112 are provided in this plan except out-of-compliance issues presented in Section 5.

The CNO also has ultimate responsibility for actions taken in conjunction with Spill Prevention, Control, and Countermeasures at NAF El Centro. Because of the size and complexity of NAF El Centro, a chain-of-command has been established to ensure compliance. The responsibility of implementing spill prevention and planning belongs to the following entities:

#### **Environmental and Natural Resources Division (Environmental Division) (Code 83)**

Responsibility for the development and implementation of the SPCC Program for NAF El Centro is delegated to the Environmental Division. The Environmental Division is responsible for: 1) Providing an SPCC Plan certified by a Registered Professional Engineer and making a copy available to EPA representatives upon request; 2) reviewing and modifying the SPCC Plan (at least once every three years) and re-certifying the SPCC Plan changes; 3) reviewing all new facility plans to determine whether proposed changes could affect the spill potential; 4) establishing and implementing training programs, spill reporting and response procedures, and the release of storm water from containment areas; 5) conducting and recording periodic inspections; 6) communicating deficiencies through chain-of-command; 7) submitting applicable reports to EPA and the California Regional Water Quality Control Board regarding any qualifying oil or hazardous substance discharges

(greater than 1,000 gallons in a single event or two spill events of harmful quantities, as defined in 40 CFR 110); 8) and reviewing, evaluating, and updating standard operating procedures, as needed.

### **Facility Environmental Coordinator**

The Facility Environmental Coordinator for each SPCC program site identified in Sections 6.0 of this IEP has the responsibility to ensure that the site is in compliance with the SPCC program requirements and to initiate actions to implement recommendations. Although the Facility Environmental Coordinator's responsibilities may differ slightly from site to site, in general, he/she is responsible for implementing compliance recommendations; developing and implementing procedural change recommendations; ensuring that site personnel are appropriately trained to prevent spills of oil or hazardous substances; notifying the Environmental Division of changes to site design, operation, or maintenance that could potentially affect oil or hazardous substance discharges; conducting and recording inspections to identify equipment damage; maintaining storm water containment drainage logs; forwarding applicable quarterly reports to the Environmental Division; maintaining a copy of the SPCC Plan at the facility; responding to spill incidents; and conducting briefings to ensure that personnel understand the facility SPCC program.

### **Public Works Department (Code 80)**

The Public Works Department is responsible for expediting facility modification upgrade requests through the proper Work Request channels. Funding approval for such requests may vary, depending on the size and urgency of the requested order. Proper storage and monitoring will minimize the risk of spills.

### **Security (Code 50)**

The responsibility of the Security Department is to control Activity access as well as routine patrols for inspection of fencelines and buildings at NAF El Centro. A secure

facility will prevent oil spills caused by vandalism or operation of equipment by unauthorized personnel.

## 2.2 APPLICABILITY

### 2.2.1 OIL

40 CFR 112 requires that SPCC Plans be prepared for both onshore and offshore areas which could reasonably be expected to discharge oil in harmful quantities into navigable waters of the United States or adjoining shorelines (40 CFR 112.1). A SPCC Plan is required to be prepared for areas that have the following storage capacities:

- (1) Underground capacity of more than 42,000 gallons of oil (40 CFR 112.1 (d)(2)(i)); or
- (2) Total aboveground storage with a capacity of greater than 1,320 gallons of oil (40 CFR 112.1 (d)(2)(ii)) or

At least one container with a capacity greater than 660 gallons (40 CFR 112.1 (d)(2)(ii)).

### 2.2.2 Hazardous Substances

SPCC Plans are not required by regulation for stored hazardous substances; however, hazardous substances are included in this plan as a best engineering practice.

## 2.3 STATE AND LOCAL REGULATIONS

This section identifies the requirements of state and local regulations and how they apply to the area. Table 2-1 shows a list of the related state and local regulatory requirements.

**Table 2-1  
Related State and Local Regulatory Burdens**

| REGULATION/LAW   | TOPIC                     | ADDITIONAL REGULATORY BURDEN  |
|--|---------------------------|---|
| California Health and Safety Code, Division 20, Chapter 6.67 | Aboveground Storage Tanks | Daily Inspections of Tanks equal to or greater than 10,000 gallons. File storage statement every two years. |
| Comments: Applies to Tanks 701, 702, 801, 802                |                           |   |

## 2.4 REVIEWS

As required by 40 CFR 112.5(b), this plan has been reviewed, evaluated, and updated, as required, within the past three years.

A Registered Professional Engineer has signed and sealed the Master Copy of this plan. The Master Copy is kept in the office of the Environmental Department Code 83, and its Review Record Section records all reviews, triennial or otherwise. The review record form is found in Table 2-2.

**Table 2-2  
Record of Reviews**

| DATE OF REVIEW | REVIEWER | REGISTRATION NUMBER | STATE OF REGISTRATION | COMMENT |
|----------------|----------|---------------------|-----------------------|---------|
|                |          |                     | CA                    |         |

## 2.5 AMENDMENTS

This SPCC Plan will be amended under the following circumstances:

**AFTER REPORTABLE SPILLS.** 40 CFR 112.4 allows the Environmental Protection Agency (EPA) to require amendment in the event of:

- a single spill event discharging more than 1,000 gallons of oil to navigable waters or adjoining shorelines; or
- two spill events within any twelve months discharging enough oil to navigable waters to cause a sheen, form sludge, or violate water quality standards (40 CFR part 110).

Change in area design, construction, operation, or maintenance that materially affects the area's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. 40 CFR 112.5(a) requires amendment to the SPCC Plan and implementation of the amended SPCC Plan within six months after such change; and

After triennial review the SPCC Plan will be amended within six months, if there is more effective field-proven prevention and control technology that will reduce the likelihood of a spill event from the area significantly.

The Registered Professional Engineer has signed and sealed the Master Copy of the plan. The Master Copy is kept in the office of the Environmental Department Code 83, and its Amendment Record section is used to record all amendments.

As required by 40 CFR Part 112.5, this section records the amendments that reflect current changes in design, construction, operation, or maintenance that affect the area's potential for discharge. Table 2-3 lists the amendments to this SPCC Plan.

## **2.6 ONGOING OR PLANNED SPCC PROJECTS**

Table 2-4 lists the current projects and projects in the planning stage which address SPCC issues and concerns or impact SPCC issues. This includes all projects that improve or modify spill control structures. Also projects dealing with the construction and modification of storage areas are listed in this table.

## **2.7 PLAN ORGANIZATION**

This SPCC Plan has been prepared for the areas located at and owned by NAF El Centro.

Section 1 provides space for the certifications that the document has been reviewed and approved.

Section 2 gives general information on the document including the purpose, applicability, governing regulations, and procedures for plan review and amendment.

Section 3 presents facility information. This information includes general facility information, facility drainage, the spill history of the areas on the facility, and a description of the areas located on the facility, which are covered by this plan.

Section 4 presents NAF El Centro's Spill History.

Section 5 presents the Activity-Wide Spill Prevention Measures.

Section 6 presents detailed discussions for each storage area.

## **2.8 PLAN DISTRIBUTION**

A Master Copy of the SPCC Plan is kept in the office of the Environmental Department Code 83. The master copy includes any records of revisions and amendments signed and sealed by a professional engineer, any written inspection procedures, records of inspections, and records of spills.

Areas attended at least 8 hours per day maintain a copy of this SPCC Plan on site. All areas forward copies of their records of inspections, spills, and changes in area structure to the office of the Environmental Department Code 83. Areas that maintain a copy of the SPCC Plan maintain copies of their records of inspections, spills, and changes in area structure. Table 2-5 lists the locations where this document is maintained.



**Table 2-4  
Ongoing or Planned Projects**

| PROJECT DESCRIPTION | IMPACT | COMPLETION DATE |
|---------------------|--------|-----------------|
|                     |        |                 |
|                     |        |                 |
|                     |        |                 |
|                     |        |                 |
|                     |        |                 |
|                     |        |                 |
|                     |        |                 |

**Table 2-5**  
**Locations Where Document is Located**

| <b>NAME OF DEPARTMENT</b>   | <b>BUILDING NUMBER</b> |
|---|------------------------|
| Hazardous Materials Distribution Center   | Building 512           |
| Hazardous Waste Management Office (for the Hazardous Waste Storage Facility [Building 530]) | Building 512           |
| Hangar 9 (Maytag's fueling operations office)   | Building 507           |
| Public Works (Environmental Division)   | Building 504           |
| Emergency Operations Center   | Building 565           |
| NEX Jet Mart  | Building 200           |

---

### 3. FACILITY INFORMATION

#### 3.1 GENERAL INFORMATION

NAF El Centro is located approximately 120 miles east of San Diego and 20 miles north of the Mexican border (Figure 1). NAF El Centro's primary mission is to support aircraft (and aircraft-related) training operations for transient military detachments from all of the Armed Forces Services. NAF El Centro is also the winter training location of the U.S. Navy's Blue Angels. Consistent with this mission, onsite storage and use of oil (primarily JP-5) and hazardous substances (lubricants, coolants, hydraulic fluid, paints, and wastes associated with these products) are necessary at NAF El Centro for aircraft and ground support equipment fueling and maintenance. Quantities of oil and hazardous substances stored or used at NAF El Centro exceed the regulatory criteria (40 CFR 112) of 660 gallons in any single aboveground storage container, 1,320 gallons aggregate aboveground, or 42,000 gallons aggregate in buried containers for non-transportation-related (NTR) facilities. Because of the quantities of oil and hazardous substances stored and used at the NAF El Centro and the close proximity of the New River, spill prevention and emergency response planning are required by federal, state, and local agencies. General information about the facility is provided in Table 3.1 and 3.2. These plans addressed a majority of the facility operations within the boundaries of NAF El Centro, including a three-mile portion of the Kinder and Morgan pipeline (that supplies NAF El Centro's Fuel Farm with JP-5 aviation fuel). A listing of responsible authorities is provided in Table 3-3. A base grid map showing the locations of the areas is provided in Figure 2.

NAF El Centro drainage is described in Section 5.4 including drainage channels, control structures, treatment units, and receiving waters.

Drainage specific to each area, including flow directions, drainage channels, control structures, area-specific treatment units, is discussed in Section 6. All additional site-specific information required by 40 CFR 112 for these areas is also presented in Section 6.

## Facility Information

| TABLE 3.1: FACILITY INFORMATION<br>QUICK REFERENCE TO NAF EL CENTRO |   |  |
|---|---|--|
| TOPIC   |   | INFORMATION  |
| FACILITY MISSION  |   | The mission of NAF El Centro is to maintain and operate facilities, as well as provide realistic training to aviation units of the Navy's operating and training forces and other military units as designated by the Chief of Naval Operations (CNO). The major function of the Activity is to serve as a support facility for the fleet air squadrons performing tactical air training, and to provide additional support to other Department of Defense (DOD) components. |
| IDENTIFICATION  | NAME  | Naval Air Facility El Centro   |
|   | OWNER   | U.S. Navy  |
|   | UIC   | N60042   |
| LOCATION  | MAILING ADDRESS                                     | Commanding Officer<br>Naval Air Facility<br>1605 Third St., Bldg. 504<br>Attn: Code 83<br>El Centro, CA 92243-5001   |
|   | PHYSICAL ADDRESS                                    | Same   |
|   | LOCATION (river mile, distance from known landmark) | NAF El Centro is located in south central Imperial County approximately 20 miles north of the United States/Mexico border (Figure 1). The facility is located approximately 120 miles east of the nearest U.S. coastal waters. The facilities western boundary is adjacent to the New River, which flows north from Mexico to Salton Sea.  |
|   | COUNTY  | Imperial County  |
|   | LATITUDE: North                                     | 32° 49' 00"  |
|   | LONGITUDE: West                                     | 115° 40' 00"   |
| PHONE NUMBERS   | 24-HR   | (760) 339-2688/2524 (Security)<br>(760) 339-2587 (FAX)   |
|   | DAY   | (760) 339-2201/2264 (Public Works Administration/Environmental)  |
|   | FAX   | (760) 339-2598/2249 (Public Works Administration/Environmental)  |
| EMERGENCY RESPONSE CONTACTS   |   | 911  |
| WELLHEAD PROTECTION AREA  |   | Not Applicable   |
| DATE OF OIL STORAGE START-UP  |   | 1940   |
| CURRENT OPERATIONS (brief description of operations)                |   | NAF El Centro uses jet fuel, diesel fuel, gasoline, lubricating oils and fluids, and paints in its daily operations. JP-5 jet fuel is used in large quantities (weekly average 278,636 gallons for 1998) and stored exclusively in steel aboveground storage tanks (ASTs). Diesel fuel used for vehicles and emergency generators is stored in relatively small quantities in aboveground storage tanks at various locations throughout NAF El Centro.                       |

| <b>TABLE 3.1: FACILITY INFORMATION<br/>QUICK REFERENCE TO NAF EL CENTRO</b> |   |
|---|---|
| <b>TOPIC</b>  | <b>INFORMATION</b>  |
|   | <p>The fuel farm, located in the southeast corner of NAF El Centro, stores large quantities (1.6 million gallons) of jet fuel. The fuel farm consists of aboveground storage tanks for storage of jet fuels, fuel loading racks for loading tank trucks, fuel loading stations for offloading fuel into aboveground storage tanks from tank trucks, and pipelines for transferring jet fuel from Kinder and Morgan pipeline to the aboveground tanks.</p> <p>Four ASTs are used for fuel storage at the fuel farm. The size and capacity of the aboveground tanks are as follows:</p> <p style="padding-left: 40px;">Tank 701 - 798,239 gallons for JP-5 fuel (95% Cap) installed 1997<br/>           Tank 702 - 794,675 gallons for JP-5 fuel (95% Cap) installed 1997<br/>           Tank 617 - 4,750 gallons contamination tank (95% Cap)<br/>           Tank 618 - 4,750 gallons contamination tank (95% Cap)</p> <p>Fuel is transferred from the fuel farm tanks to the aircraft by 8,000-gallon tank trucks. The majority of the aircraft fueling is performed along the flight line. Aircraft is also fueled at the direct fueling pad located southeast of the intersection of Taxiways A/E, B/E, and E. 60 ft of 16-inch diameter steel aboveground pipeline and 750+ ft of 2-inch to 10-inch steel aboveground pipelines transfers the fuel to the ASTs. Three ASTs are located in this area. They consist of:</p> <ul style="list-style-type: none"> <li>· Tank 801 - 28,874 gallons for JP-5 fuel (95% Cap)</li> <li>· Tank 802 - 28,874 gallons for JP-5 fuel (95% Cap)</li> <li>· Tank 803 - 3,000 gallons for stripping fuel (95% Cap)</li> </ul> <p>Fuel farm management and all Activity fueling operations are performed by the civilian contractor Maytag Aircraft Corporation (Maytag).</p> <p>JP-5 fuel is delivered to the fuel farm via the Kinder and Morgan pipeline and 8,000-gallon tank trucks (as needed). The pipeline delivers fuel about once per week during heavy aircraft activity and once every two to three weeks at other times. The supplementary tank truck deliveries are required only when Kinder and Morgan cannot supply the necessary volume of fuel, which is approximately once a year.</p> <p>The underground Kinder and Morgan pipeline enters NAF El Centro at the southeast corner of the fuel farm. Upon entering NAF El Centro, the fuel is pumped through a filter/separator to the ASTs (Tanks 701 and 702). The pipeline up to the filter/separator is owned and maintained by Kinder and Morgan. The filter/separator and all post-filter distribution piping are the responsibility of NAF El Centro.</p> |

| TABLE 3.1: FACILITY INFORMATION<br>QUICK REFERENCE TO NAF EL CENTRO   |                   |  |
|---|-------------------|--|
| TOPIC   |                   | INFORMATION  |
|   |                   | <p>NAF El Centro also operates two service stations, Building 200-NEX and Building 400-Maytag. The service stations store fuel (NEX-gasoline only and Maytag-gasoline and diesel) in two 10,000-gallon ASTs. The ASTs were installed in 1993, after which, underground storage tanks were closed and removed.</p> <p>In addition to fueling, aircraft and ground support equipment maintenance is performed primarily in facilities along the flight apron to the south and west of the airfield. Ordnance is stored north of the airfield.</p>  |
| SIC CODE (primary)  |                   | 9711 (National Security)   |
| DATES AND TYPES OF SUBSTANTIAL EXPANSIONS OF OIL STORAGE  |                   | <p>1953 - Ten (10) underground storage tanks were installed at the fuel farm located at the southeast corner of NAF El Centro and had a storage capacity of approximately 1.2 million gallons. However, as of 1998, all known underground tanks at NAF El Centro have been removed.</p> <p>1997 - Two (2) aboveground storage tanks were installed at the fuel farm to replace three underground storage tanks. The total storage capacity at the fuel farm was increased to over 1.6 million gallons. In addition, two (2) 30,000-gallon aboveground tanks were installed at the direct fueling pad (aircraft fueling) located southeast of the intersection of Taxiways A/E, B/E, and E in the southern portion of the airfield.</p> |
| PIPELINE RESPONSE ZONES   | 1. Not Applicable | Not Applicable. There are no Navy-owned pipelines that exit the Activity property and require other Response Resources than these contained in this plan.  |
|   | 2.                |  |
| <p>A pipeline response zone for OPA 90-regulated pipelines (i.e., Navy-owned or operated pipelines leaving the installation's contiguous property) is an off-installation area that can be responded to by the same resources; multiple response zones exist only if the installation cannot respond to a discharge from any OPA 90-regulated pipeline.</p> |                   |  |

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| <b>TABLE 3.2: ADJACENT PROPERTIES AND TOPOGRAPHY<br/>QUICK REFERENCE TO NAF EL CENTRO</b> |   |
|---|---|
| <b>LOCATION</b>   | <b>DESCRIPTION</b>  |
| NORTH   | The Elder Lateral is located along the northern boundary of NAF El Centro (Figure 4). Irrigated agricultural land exists beyond the irrigation canal. In addition, several parcels of land on the northern portion of the Base have been leased for agricultural purposes.  |
| EAST  | The Elm Canal and Rice Drain bound NAF El Centro to the east (Figure 4). Irrigated agricultural land exists beyond these irrigation features.   |
| SOUTH   | Irrigated agricultural land is located immediately south of the Base (Figure 4). Several parcels of land in the southeast and southwest corners of the Base have been leased for agricultural purposes. In addition, the town of Seeley (estimated population 1600) is located approximately 1 mile southwest of NAF El Centro.   |
| WEST  | Elder Lateral, Elder Canal and Elder Drain bound the site to the west (Figure 4). Beyond these irrigation features, the New River passes within ½ mile (2,640 ft) of the northwestern boundary of the Base. Small tracts of irrigated land exist both on-Base and between the Base and the river. Significantly larger tracts of irrigated agricultural land exists along the southwestern boundary of NAF El Centro, between the Base and the river (nearly one mile to the west). |
| GENERAL TOPOGRAPHY  | NAF El Centro exists at an approximate elevation of 45 feet below mean sea level (bmsl). The regional topography is relatively flat, with a very gentle slope to the northwest (towards the New River) of approximately 0.23 feet per mile. On-Base, the slope of the topography is slightly less, at 0.15 feet per mile. Regional drainage flows to the New River, which flows to the Salton Sea (approximately 2.7 miles (as the river flows) to the north).                      |
| CLIMATE   | The Imperial Valley, where NAF El Centro is located, is arid (typically warm and dry). The annual average rainfall is 3.2 inches. Daily temperatures between June and September range from 70 to over 100 degrees Fahrenheit (F). Daily winter temperatures range from 50 to 80 degrees F.  |

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**Table 3-3  
Responsible Authorities**

|                               |   |
|-------------------------------|---|
| NATIONAL RESPONSE CENTER      | 800-424-8802                            |
| EPA REGION                    | EPA Region 9 (San Francisco, CA)        |
| COAST GUARD DISTRICT          | Coast Guard District 11 (San Diego, CA) |
| COAST GUARD CAPT. OF THE PORT | (619) 683-6495                          |
| NAVFAC EFD/EFA                | EFD Southwest (San Diego, CA)           |

Location Map (Figure 1)

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Base Map

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## **3.2 AREA INFORMATION**

### **3.2.1 Description of Storage**

This section includes a summary of the types of storage tanks, materials and quantities stored, and areas on the facility that are required to be covered under this SPCC Plan as defined by 40 CFR 112.1. Tanks and containers included in this plan are aboveground storage tanks (including heating oil tanks), oil/water separators, mobile or portable storage tanks, hazardous waste/hazardous substance storage areas (including drums), transformers, pipelines and other transfer equipment, and tanker truck loading racks and parking areas. The area where each item is located is also identified. The items are discussed in detail in Section 6 and organized by area.

### **3.2.2 Aboveground Storage Tanks**

This subsection includes a summary of priority sites greater than 1,000 gallon located throughout the facility developed through the field survey. Table 3.4 provides information identifying location of tank, capacity of tank, tank material, type of material stored, year installed, and type of secondary containment.

| <b>TABLE 3.4: PRIORITY SITES</b>   |   |
|--|---|
| <b>QUICK REFERENCE TO SITES WITH &gt;1,000-GALLON STORAGE CAPABILITIES</b> |   |
| <b>BUILDING</b>  | <b>RATIONALE FOR PRIORITY SITE</b>  |
| FUEL FARM  | <p>Largest fuel storage area at NAF El Centro. Over 1.6 million gallons of JP-5 (jet fuel) can be stored in aboveground storage tanks.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two 798,239-(95% cap) gallon ASTs (constructed 1997)</li> <li><input type="checkbox"/> Two 4,750-(95% cap) gallon ASTs (contaminated fuel)</li> <li><input type="checkbox"/> 100 ft of 6-inch diameter steel underground pipeline (Kinder and Morgan)</li> <li><input type="checkbox"/> 1500+ ft of 2-inch to 10-inch diameter steel aboveground pipelines (fuel transmission).</li> </ul> |
| DIRECT FUELING PAD   | <p>Second largest fuel storage area at NAF El Centro (constructed 1997).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two 28,874 (95% cap)-gallon ASTs</li> <li><input type="checkbox"/> One 3,000-gallon ASTs</li> <li><input type="checkbox"/> 60 ft of 16-inch diameter steel aboveground pipeline</li> <li><input type="checkbox"/> 750+ ft of 2-inch to 10-inch steel aboveground pipelines</li> </ul>  |
| BUILDING 200 - NEX SERVICE STATION   | <p>This service station stores gasoline only.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two 10,000-gallon ASTs</li> <li><input type="checkbox"/> 200+ ft of 2-inch diameter steel underground pipelines</li> </ul>  |
| BUILDING 400 – FUELS DEPARTMENT SERVICE STATION                            | <p>This service station stores gasoline and diesel fuels:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two 10,000-gallon ASTs</li> <li><input type="checkbox"/> 200+ ft of 2-inch diameter steel underground pipelines</li> </ul>  |
| BUILDINGS 512 and 519 - HAZARDOUS MATERIALS DISTRIBUTION CENTERS           | <p>This facility stores bulk quantities of hazardous and potentially hazardous materials for Base-wide distribution.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1000+ containers (of products) ranging in size from &lt;1-ounce cans and tubes to 55-gallon drums.</li> </ul> <p>NAF El Centro's policy is to issue only daily-use quantities of product to Base personnel.</p>  |
| BUILDING 530 - HAZARDOUS WASTE STORAGE FACILITY                            | <p>This facility is a staging area for bulk quantities of hazardous wastes.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Varying quantities (10-100) of 35-gallon to 55-gallon drums of a variety of waste types are temporarily stored prior to disposal.</li> </ul> <p>Waste disposal shipments typically occur monthly.</p>   |
| BUILDING 220 - SMOKE OIL TANK  | <p>This facility consists of a tank for oil storage.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 5,000-gallon AST</li> </ul>  |
| BUILDING 204 - LIQUID OXYGEN AND NITROGEN TANK FARM                        | <p>This facility stores bulk quantities of liquid oxygen and nitrogen:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two 2,000-gallon ASTs (Lox)</li> <li><input type="checkbox"/> Two 1,000-gallon ASTs (Nit)</li> </ul>   |

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### 3.2.3 Underground Storage Tanks

This subsection includes a summary of all basewide underground storage tanks. Table 3.5 provides information identifying the tank location, tank capacity, tank material, type of material stored, year installed.

**Table 3-5  
Underground Tank Summary**

| Tank Location  | Tank Capacity | Tank Material | Type of Material Stored | Year Installed |
|----------------|---------------|---------------|-------------------------|----------------|
| Building 120   | 500 Gallons   | Diesel        | Abandoned               | Unknown        |
| Building 214 B | 1,400 Gallons | Diesel        | Abandoned               | Unknown        |
| Building 359A  | Unknown       | Unknown       | Abandoned               | Unknown        |
| Building 359B  | Unknown       | Diesel        | Abandoned               | Unknown        |
| Building 125A  | 42,000        | Unknown       | Abandoned               | Unknown        |
| Building 125B  | 25,000        | Unknown       | Abandoned               | Unknown        |
| Building 125C  | 20,000        | Unknown       | Abandoned               | Unknown        |

### 3.2.4 Pipelines

This subsection includes a summary of aboveground and underground pipelines transporting oil and hazardous substance located throughout the facility. Table 3.6 provides information-identifying location, size of pipe, pipeline material of construction, type of materials transferred, and secondary containment.

**Table 3-6  
Pipeline Facilities**

| TABLE 3.6: PIPELINE FACILITIES  |                                  |                         |                   |                    |                        |
|---------------------------------|----------------------------------|-------------------------|-------------------|--------------------|------------------------|
| PIPELINE LOCATION               | OIL/HAZARDOUS SUBSTANCE CONVEYED | MAXIMUM FLOW RATE (gpm) | PIPE MATERIAL     | PIPE DIAMETER (IN) | FAILURE CAUSE AND DATE |
| Fuel Farm-Santa Fe Pacific      | JP-5                             | 188                     | Aboveground-Steel | 4                  | None                   |
| Fuel Farm-Variou s Distribution | JP-5                             | 188                     | Aboveground-Steel | 2 to 8             | None                   |
| Fuel Farm-Direct Fueling Pad    | JP-5                             | 188                     | Aboveground-Steel | 10                 | None                   |

### 3.2.5 Tank Truck Loading and Unloading Areas

This subsection includes summary information for tanker truck loading and unloading areas located throughout the facility. Table 3.7 provides information-identifying locations, number of racks or bays, type of material transferred, and type of secondary containment.

**Table 3-7  
Tanker Truck Loading and Unloading Areas**

| TABLE 3.7: LOADING AND UNLOADING AREAS |           |   |   |
|--|-----------|---|---|
| LOADING/UNLOADING OPERATION            |           | POTENTIAL DISCHARGE SCENARIOS   | TYPICAL TRANSFER VOLUME (gal)                             |
| TANK TRUCK                             | LOADING   | Potential spill sources in the loading rack area (located at the Fuel Farm) include overfilling of a tanker truck, a hose or piping rupture during fuel transfer to the trucks, or accidental release of fuel from the parked tank truck. | Truck compartment: 8,000<br>One truck total volume: 8,000 |
|  | UNLOADING | Potential spill sources at the unloading station (located at the Fuel Farm) include hose or piping rupture during fuel transfer from an 8,000-gallon truck. The 8,000-gallon truck has one compartment.                                   | Truck compartment: 8,000<br>One truck total volume: 8,000 |

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### 3.2.6 FACILITIES PRESENTING RISK OF SPILLS

A total of 58 facilities at NAF El Centro use, store, or transfer oil or hazardous substances and, therefore, present a risk for spills. These 58 facilities include 39 with ASTs, and 26 with product or waste in excess of 55 gallons. There are no surface impoundments currently in use at NAF El Centro. Realizing the potential for spills from these facilities, NAF El Centro has implemented secondary containment to minimize the spill potential at most of these tank and large-quantity storage sites. Each of these sites is discussed individually in Section 6.0.

Fuel transmission lines, located primarily in the Fuel Farm at NAF El Centro, also present a potential for spills. The Kinder and Morgan Pipeline, which supplies the Fuel Farm with JP-5, enters NAF El Centro in the southeast corner of the Activity. Kinder and Morgan is responsible for the fuel line up to the filter separator (on NAF property). However, after filter/separation, the fuel is considered the responsibility of NAF El Centro. Post filtration, the fuel is transferred to the AST at the Fuel Farm. From these tanks it is further piped to the truck loading rack, stripping tanks, and the direct fueling ASTs. Fuel is not transferred off-Base by truck or pipeline. A summary of the fuel line information is presented in Table 3.8.

In addition to the storage sites, there are several operations related to these ASTs, and pipeline sites that present spill potentials. These other potential spill sites include loading and unloading transfer facilities (Table 3.7) and daily operations (Table 3.9). Table 3.10 describes the effects of change in the throughput on potential spill volumes.

| TABLE 3.8: PIPELINE FACILITIES PRESENTING SPILL RISKS |                                  |                         |                   |                    |                        |
|---|----------------------------------|-------------------------|-------------------|--------------------|------------------------|
| PIPELINE LOCATION                                     | OIL/HAZARDOUS SUBSTANCE CONVEYED | MAXIMUM FLOW RATE (gpm) | PIPE MATERIAL     | PIPE DIAMETER (IN) | FAILURE CAUSE AND DATE |
| Fuel Farm-Kinder and Morgan                           | JP-5                             | 188                     | Aboveground-Steel | 4                  | None                   |
| Fuel Farm-Variou Distribution                         | JP-5                             | 188                     | Aboveground-Steel | 2 to 8             | None                   |
| Fuel Farm-Direct Fueling Pad                          | JP-5                             | 188                     | Aboveground-Steel | 10                 | None                   |

| TABLE 3.9: OIL AND HAZARDOUS SUBSTANCES DAY-TO-DAY OPERATIONS PRESENTING SPILL RISKS |   |
|--|---|
| DAY-TO-DAY OPERATION   | DESCRIPTION   |
| PIPE REPAIR  | <p>Equipment failures due to faulty installation or repairs, e. g., installing bolts improperly, installing components with incorrect specifications, and installing improperly selected gaskets.</p> <p>Failure to completely or adequately isolate and evacuate oil in section or component before repairs.</p> |
| VALVE REPAIR   | <p>Leaks from valve stems due to improperly adjusted valve packings and failures of valve body parts due to improper joining to piping.</p> <p>Improper adjustment of pressure relief valves.</p> <p>Failure to completely or adequately isolate and evacuate oil before repairing valve.</p>                     |
| TANK-TO-TANK TRANSFERS   | <p>Overfills due to valve misalignments and/or tank gauging errors.</p>   |
| TANK TRUCK DELIVERIES  | <p>Leaks from piping, fittings, valves, hoses, transfer connections, and other equipment, to include the tank truck.</p> <p>Operator errors and equipment malfunctions that cause overfills during loading operations.</p>  |
| DRAINING TANK BOTTOM WATER   | <p>Inadequate monitoring of bottom water draining operation.</p>  |
| DRAINING SECONDARY CONTAINMENT   | <p>Inadequate inspection of impounded dike water before draining dike.</p> <p>Not fully closing dike drainage valve after opening.</p>  |

| TABLE 3.10: EFFECTS OF CHANGES IN OIL AND HAZARDOUS SUBSTANCES THROUGHPUT ON POTENTIAL SPILL VOLUMES  |                                 |   |
|---|---------------------------------|---|
| TYPE THROUGHPUT   | AVERAGE DAILY THROUGHPUT* (gal) | HOW SPILL VOLUME COULD BE AFFECTED BY CHANGE IN THROUGHPUT  |
| TRANSFERS TO/FROM TANK TRUCKS   | 46,439 gal                      | An increase or decrease in throughput will not change the potential spill volume at the tank truck transfer facility unless the facility begins to service tank trucks with capacities greater than 8,000 gallons or adds additional fuel loading capabilities. |
| DIRECT TRANSFER FROM TANK TO AIRCRAFT   | 47,818 gal                      | An increase in the throughput may change the spill volume. The spill volume is dependent on the flow rate and the time required to terminate the flow. An increased flow rate may increase the spill volume.  |
| TRANSFERS FROM PIPELINES  | 46,439 gal                      | An increase or decrease in pipeline throughput may change the potential spill volume. The spill volume is dependent on the flow rate and the time required to terminate the flow. An increase in flow rate may increase the spill volume.                       |
| *Average daily throughput is based on 1998 average weekly fuel use of 278,636 gallons per week, and a 6-day work week. Actual daily throughput varies, particularly for the pipeline transfers, which may actually occur daily to weekly. |                                 |   |

### 3.2.7 SUBSTANTIAL HARM CLASSIFICATION

In accordance with Appendix C of 40 CFR 112, a facility that uses, stores, or transfers oil must determine whether the facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on navigable waters or adjoining shorelines." NAF El Centro is a complex, NTR facility that meets the criteria for posing substantial harm. In addition, the existing Kinder and Morgan pipeline, which supplies JP-5 fuel to NAF El Centro, meets the criteria for posing substantial harm. Consistent with these classifications, NAF El Centro has performed the appropriate facility response planning requirements including, spill analysis, response planning distances determinations, and small-, medium-, and worst-case discharge scenario evaluations, as described in the following sections.

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### 3.2.8 ANALYSIS OF THE POTENTIAL FOR AN OIL SPILL

Several methods exist to assess the spill potential at a site. The Naval Facilities Engineering Command (NAVFACENGCOM) has taken a quantitative approach, using historic spill data from over 100 Naval Air Stations worldwide during 1990 and 1991. Naval Air Stations were selected because they represent major Navy installations with OPA 90 facilities. Table 3.12 summarizes this analysis.

Table 3.14 can reasonably be expected to reflect routine, nonchronic discharges for NAF El Centro better than conventional risk analysis methods using subjective estimates. Only one catastrophic spill was experienced in the time frame of the analysis. The estimated annual probability and years between occurrences of a specific spill cause at a given installation are predictions of likelihood for a given spill type. The percent of number of discharges is an indicator of frequency of a discharge, but it is skewed towards the smallest discharges, because smaller spills are more common. The percent by volume is an indicator of the seriousness of various causes of a discharge, because it factors in both frequency and volume. Note that the 900,000 gallons was excluded from this portion of the analysis, because this evaluation reflects trends and not individual events.

TABLE 3.12: ANALYSIS OF POTENTIAL FOR A SPILL

| CAUSE                                   | NUMBER OF DISCHARGES |      | TOTAL VOLUME (gal) |         | AVERAGE VOLUME (gal) |         | PERCENT OF TOTAL |        | PROBABILITY (for given NAS) |           |
|---|----------------------|------|--------------------|---------|----------------------|---------|------------------|--------|-----------------------------|-----------|
|   | FY90                 | FY91 | FY90               | FY91    | FY90                 | FY91    | BY #             | BY VOL | ANNUAL %                    | YRS APART |
| Structural failure                      | 10                   | 5    | 4741               | 620     | 474                  | 124     | 22%              | 30%    | 6.4%                        | 16        |
| Hose failure or leak                    | 2                    | 3    | 60                 | 317     | 30                   | 106     | 7%               | 2%     | 2.1%                        | 48        |
| Equipment failure                       | 3                    | 6    | 2375               | 590     | 792                  | 98      | 13%              | 17%    | 3.8%                        | 26        |
| Valve misalignment, opening, or failure | 4                    | 5    | 2338               | 324     | 585                  | 65      | 13%              | 15%    | 3.8%                        | 26        |
| Personnel or monitoring error           | 10                   | 9    | 1445               | 2606    | 145                  | 290     | 28%              | 23%    | 8.1%                        | 12        |
| Tank overflow                           | 3                    | 1    | 105                | 900,000 | 35                   | 900,000 | 6%               | 1%     | 1.7%                        | 59        |
| Runoff or leaching                      | 1                    | 1    | 200                | 100     | 200                  | 100     | 3%               | 2%     | 0.8%                        | 125       |
| Vehicle accident                        | 2                    | 3    | 675                | 1305    | 338                  | 435     | 7%               | 11%    | 2.1%                        | 48        |
| Unknown                                 | 9                    | 12   | 3940               | 609     | 438                  | 51      | na               | na     | 9.0%                        | 11        |
| Collision, grounding, or sinking        | 1                    | 0    | 20                 | 0       | 20                   | 0       | 1%               | 0%     | 0.4%                        | 250       |
| Totals                                  | 45                   | 45   | 15,899             | 906,471 | 353                  | 20,144  | 100%             | 101%   | na                          | na        |

Source: the FY90 and FY91 editions of Naval Oil Spills Annual Report (using only spills reported to the Naval Facilities Engineering Service Center by the 117+ Naval Air Stations worldwide).  
 FY91 is skewed by a 900,000-gal overfill at NAS Cecil Field, FL; it was allowed to remain in this analysis (except percentage of volume) to make it particularly realistic.

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Table 3.13 presents a site-specific analysis of spills at NAF El Centro. The following analysis was prepared by examining NAF El Centro's recorded spill history between 1994 and 1998. The causes of spills have been categorized by type, such as structural failure, hose failure, equipment failure, and personnel error.

The annual spill potential, number of spills column was derived from the total number of discharges averaged over five years. The spill potential, volume per spill column was derived from the total volume discharge averaged over five years. The analysis shows that the most common causes for the spills can be attributed to equipment failure with an annual estimated occurrence rate of 3 spills per year, at an estimated spill volume of 1,685 gallons per year. In contrast, minor spills of overflowing tanks occur with an annual volume spill potential of one gallon per year. Implementing Best Management Practices (BMPs), such as maintaining vehicles in good working condition and performing regular equipment maintenance can significantly reduce the number of equipment failure-related spills at NAF El Centro.

TABLE 3.13: SITE-SPECIFIC ANALYSIS OF POTENTIAL FOR A SPILL

| CAUSE                         | NUMBER OF DISCHARGES BY YEAR |          |          |          |          | TOTAL VOLUME PER YEAR (gallons) |           |           |            |               | TOTAL NUMBER OF DISCHARGES (OVER 5 YEARS) | TOTAL VOLUME DISCHARGE (gallons) (CUMULATIVE) | ANNUAL SPILL POTENTIAL (averaged over 5 years) |                  |
|-------------------------------|------------------------------|----------|----------|----------|----------|---------------------------------|-----------|-----------|------------|---------------|---|---|--|------------------|
|                               | FY94                         | FY95     | FY96     | Fy97     | Fy98     | FY94                            | FY95      | FY96      | Fy97       | Fy98          |   |   | NUMBER OF SPILLS                               | VOLUME PER SPILL |
| Structural failure            | 1                            | 1        | 1        | 0        | 0        | 55                              | 5         | 5         | 0          | 0             | 3   | 95  | 0.6  | 31.7             |
| Hose failure or leak          | 0                            | 0        | 0        | 0        | 0        | 0                               | 0         | 0         | 0          | 0             | 0   | 0   | 0  | 0                |
| Equipment failure             | 8                            | 6        | 1        | 0        | 1        | 1,092                           | 66        | 3         | 0          | 25,801        | 16  | 26,962  | 3.2  | 1,685            |
| Personnel or monitoring error | 5                            | 0        | 1        | 2        | 0        | 62                              | 0         | 15        | 85         | 0             | 8   | 162   | 1.6  | 20.2             |
| Tank overflow                 | 0                            | 0        | 0        | 1        | 0        | 0                               | 0         | 0         | 30         | 0             | 1   | 30  | 0.2  | 30               |
| Vehicle accident              | 0                            | 0        | 0        | 0        | 0        | 0                               | 0         | 0         | 0          | 0             | 0   | 0   | 0  | 0                |
| Unknown                       | 1                            | 1        | 1        | 0        | 0        | 1                               | 5         | 5         | 0          | 0             | 3   | 11  | 0.6  | 3.7              |
| <b>TOTALS</b>                 | <b>15</b>                    | <b>8</b> | <b>4</b> | <b>3</b> | <b>1</b> | <b>1,210</b>                    | <b>76</b> | <b>28</b> | <b>115</b> | <b>25,801</b> | <b>31</b>                                 | <b>27,260*</b>                                | <b>6.2</b>                                     | <b>879.3</b>     |

Annual number of spills was derived from the total number of discharges divided by five years.

Annual volume per spill was derived from the total volume discharge divided by five years.

\*A large portion of the Total Volume Discharge Cumulative is attributed to equipment failure.

Table 3.14 reflects the spill potential for an oil spill at selected sites at NAF El Centro. The ranking of low, medium, or high, is a subjective determination based on current practices and historic occurrences at these facilities.

| TABLE 3.14: SITE-SPECIFIC ANALYSIS OF THE POTENTIAL FOR OIL SPILLS AT IDENTIFIED SOURCES  |                     |
|---|---------------------|
| FUEL LOADING AND UNLOADING OPERATIONS (TANK TRUCKS) WITHIN THE TANK FARM<br>FUEL LOADING AND UNLOADING OPERATIONS (AIRCRAFT)<br>FUEL LOADING AT THE ASTs WITHIN THE FLIGHT LINE<br>CHEMICAL LOADING AND UNLOADING AT ASTs AT SPCC-RELATED BUILDINGS |                     |
| FACTOR  | LOW, MEDIUM OR HIGH |
| Probability of spills from equipment failure, malfunction, leaks, etc., due to age  | Medium              |
| Probability of spills due to throughput activity  | Medium              |
| Number of past spills   | Low                 |
| Probability that corrective actions for spills will <b>not</b> eliminate or minimize same spills in future  | Medium              |
| Accessibility of pathways to navigable water/sensitive areas<br>Pathways: Drainage ditches flow to New River, which bounds NAF to the west  | High                |
| Vulnerability to natural disasters<br>Types: Earthquakes  | Low                 |
| Probability of spills due to maintenance deficiencies   | Low                 |
| Probability of spills due to operator training, job knowledge, and Standard Operating Procedures (SOP) shortfalls   | Low                 |
| Potential for spills because of noncompliance with SPCC plan prevention requirements  | Low                 |
| <b>OVERALL POTENTIAL</b>  | <b>Medium</b>       |

## 4. SPILL HISTORY

Spills occurring between 1992 through 1998 were recorded in the Spill Log maintained by the NAF El Centro's Environmental Division. Table 4.2 summarizes the spills over these six years. All spills to the ground surface were less than 100 gallons in size and most spills were less than 10 gallons. In all cases, no oil or hazardous material impacted navigable waters of the U.S. A review of the listed spills indicates that not all spills are reported to the Environmental Division for incorporation into the Spill Log. This record-keeping should be improved by using the NAF El Centro Spill Report (Figure 3).

**NAF EL CENTRO  
SPILL REPORT**

Time: \_\_\_\_\_ Date: \_\_\_\_\_ Location: \_\_\_\_\_  
Reported by: \_\_\_\_\_  
Substance spilled: \_\_\_\_\_  
Amount of spill: \_\_\_\_\_  gals.  lbs.  
Individuals notified: \_\_\_\_\_  
UIC: \_\_\_\_\_  
Unit or Activity: \_\_\_\_\_ Unit or Activity phone number \_\_\_\_\_  
Bureau number (if applicable): \_\_\_\_\_

Description of Spill:

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Recovery and Cleanup Action:

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HAZMAT Use Only

- Mechanical failure     Personnel or monitoring error     Tank overflow     Hose failure or leak  
 Unknown     Structural failure

**FIGURE 3**

| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (>25 GALLONS)  |           |           |                     |  |
|---|-----------|-----------|---------------------|--|
| DATE:   | LOCATION: | PRODUCT:  | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 1/7/92  | Fuel Farm | JP-5 Fuel | 100                 | None                                     |
| CAUSE/ACTIONS   |           |           |                     |  |
| <b>Cause:</b> The fuel was leaking from the flange on a Southern Pacific pipeline.  |           |           |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable  |           |           |                     |  |
| <b>Detection:</b> The spill was observed by the Fire Department while they were on inspection. Fuel Farm personnel cleaned up the spill |           |           |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |           |           |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> Spill was cleaned up and contained by Fuel Farm personnel.                                       |           |           |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Continue regular monitoring.  |           |           |                     |  |
| <b>Enforcement Action:</b> None   |           |           |                     |  |
| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (>25 GALLONS)  |           |           |                     |  |
| DATE:   | LOCATION: | PRODUCT:  | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 8/28/92   | Hangar #7 | JP-5 Fuel | 25                  | None                                     |
| CAUSE/ACTIONS   |           |           |                     |  |
| <b>Cause:</b> The airplane tank was over-filled and the fuel was leaking from the fuel cap.   |           |           |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable  |           |           |                     |  |
| <b>Detection:</b> Detected by Activity personnel. The Fire Department and Security were notified.                                       |           |           |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |           |           |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> A bucket was placed under the leak and Speedy-Dry was placed around the leak on the ground.      |           |           |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> SPCC refresher training for fueling personnel.  |           |           |                     |  |
| <b>Enforcement Action:</b> None   |           |           |                     |  |

| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)  |                 |             |                     |  |
|---|-----------------|-------------|---------------------|--|
| DATE:   | LOCATION:       | PRODUCT:    | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 2/1/94  | NAFEC Fuel Farm | JP-5 Fuel   | 30                  | None                                     |
| <b>CAUSE/ACTIONS</b>  |                 |             |                     |  |
| <b>Cause:</b> Leak from a Fuel Farm fuel stand. Fuel truck driver drove away from the fuel station while the fuel hose was still attached. This caused a supply pipe to break.  |                 |             |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable  |                 |             |                     |  |
| <b>Detection:</b> The CO at NAF notified the PWC foreman of San Diego who notified Jim Collins (Environmental Protection Specialist), who then contacted Maytag Corp.   |                 |             |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |                 |             |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> The spilled fuel flowed from the concrete into a storm drain pipe. A fuel-pumping truck was positioned at the end of the pipe and the spilled fuel was recovered without further contamination. The pipe was flushed with water and this water was also collected. |                 |             |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> It is recommended to securely mount the ground fuel systems piping. Implemented use of deadman switch. And, recommended containment for the fuel loading/unloading areas.   |                 |             |                     |  |
| <b>Enforcement Action:</b> None   |                 |             |                     |  |
| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)  |                 |             |                     |  |
| DATE:   | LOCATION:       | PRODUCT:    | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 2/22/94   | Hangar 6        | Diesel Fuel | 55                  | None                                     |
| <b>CAUSE/ACTIONS</b>  |                 |             |                     |  |
| <b>Cause:</b> Unlabeled 55-gallon drum with no secondary containment was leaking.   |                 |             |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> No secondary containment in place.  |                 |             |                     |  |
| <b>Detection:</b> Drum leak detected during an environmental inspection by Activity personnel.  |                 |             |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |                 |             |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> Contractor was informed to provide secondary containment to prevent any further migration of fuel.   |                 |             |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Secondary containment recommended. Large quantity storage no longer permitted (daily-use quantities only).  |                 |             |                     |  |
| <b>Enforcement Action:</b> None   |                 |             |                     |  |

| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)  |               |           |                     |  |
|---|---------------|-----------|---------------------|--|
| DATE:   | LOCATION:     | PRODUCT:  | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 3/28/94   | Cement Runway | JP-5 Fuel | 40                  | None                                     |
| <b>CAUSE/ACTIONS</b>  |               |           |                     |  |
| <b>Cause:</b> Leak from broken fuel line on F-18 Jet. 40 Gallons spilled.   |               |           |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable  |               |           |                     |  |
| <b>Detection:</b> Detected by Activity personnel. NRC was contacted. Federal Fire Department was contacted.   |               |           |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |               |           |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> Federal Fire Department responded. Area cleaned up by the Public Works Contractor. Fuel was removed with oil-absorbing pads. Spill was limited to runway. No off-site migration. |               |           |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Continue regular equipment inspections.   |               |           |                     |  |
| <b>Enforcement Action:</b> None   |               |           |                     |  |
| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)  |               |           |                     |  |
| DATE:   | LOCATION:     | PRODUCT:  | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 11/1/94   | Air           | JP-5 Fuel | 1000                | None                                     |
| <b>CAUSE/ACTIONS</b>  |               |           |                     |  |
| <b>Cause:</b> An F-18 lost a flap, which caused a hole in the fuel tank.  |               |           |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable  |               |           |                     |  |
| <b>Detection:</b> Pilot   |               |           |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable  |               |           |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> The fuel release happened above 5000 ft. according to the pilot. The fuel was dispersed before reaching the ground.  |               |           |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Continue regular equipment monitoring.  |               |           |                     |  |
| <b>Enforcement Action:</b> Not reportable unless below 5000 ft.   |               |           |                     |  |

| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)                                     |                                    |          |                     |  |
|--|------------------------------------|----------|---------------------|--|
| DATE:  | LOCATION:                          | PRODUCT: | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 7/8/97   | Hanger 2                           | JP-5     | 35 Gallons          | None                                     |
| <b>CAUSE/ACTIONS</b>   |                                    |          |                     |  |
| <b>Cause:</b> Aircraft spill.  |                                    |          |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment</b>   |                                    |          |                     |  |
| <b>Detection:</b> VFA 106 Maintenance Personnel  |                                    |          |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable   |                                    |          |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> Cleaned with 6 bags of speedy dry. Took 2 ½ hours to clean.               |                                    |          |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> SPCC refresher training for fueling personnel.                       |                                    |          |                     |  |
| <b>Enforcement Action:</b> None.   |                                    |          |                     |  |
| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)                                     |                                    |          |                     |  |
| DATE:  | LOCATION:                          | PRODUCT: | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 10/14/97   | Transit line for squadron HMLA 267 | JP-5     | 20-30 Gallon        | None                                     |
| <b>CAUSE/ACTIONS</b>   |                                    |          |                     |  |
| <b>Cause:</b> Overflow at fuel delivery location.  |                                    |          |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable                                       |                                    |          |                     |  |
| <b>Detection:</b> HMLA 267 Maintenance   |                                    |          |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable.  |                                    |          |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> Cleaned up fuel spill and secured area to get equipment for dirt removal. |                                    |          |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Continue regular equipment inspections.                              |                                    |          |                     |  |
| <b>Enforcement Action:</b> None.   |                                    |          |                     |  |

| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)   |   |          |                     |  |
|--|---|----------|---------------------|--|
| DATE:  | LOCATION:   | PRODUCT: | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 10/29/97   | Direct Fueling                                    | JP-5     | 50 Gallons          | None                                     |
| <b>CAUSE/ACTIONS</b>   |   |          |                     |  |
| <b>Cause:</b> Line personnel forgot to check what maintenance was being performed on aircraft. The fuel flow valve was in the open position.   |   |          |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable.  |   |          |                     |  |
| <b>Detection:</b> Aircraft maintenance personnel.  |   |          |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable.  |   |          |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> 50 gallons of JP-5 spilled on the ground and was contained with pigmat barriers. Cleaned up with safe step absorbent and 20 gallons was captured in leak buckets.   |   |          |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> SPCC refresher training for fueling personnel,   |   |          |                     |  |
| <b>Enforcement Action:</b> None.   |   |          |                     |  |
| TABLE 4.1: OIL AND HAZARDOUS SUBSTANCE SIGNIFICANT SPILL HISTORY (CONTINUED)   |   |          |                     |  |
| DATE:  | LOCATION:   | PRODUCT: | SPILL VOLUME (gal): | SPILL VOLUME INTO NAVIGABLE WATER (gal): |
| 8/8/98   | Fuel transfer line between Fuel Farm and Hot Pits | JP-5     | 25,801 gallons      |  |
| <b>CAUSE/ACTIONS</b>   |   |          |                     |  |
| <b>Cause:</b> Blown gasket in the transfer line manway. The manual override was incorrectly operated, due to receiving wrong training. The automatic valves in the system had the manual override switches installed backwards and Maytag was trained on these two valves. |   |          |                     |  |
| <b>Effectiveness and Capacity of Secondary Containment:</b> Not applicable.  |   |          |                     |  |
| <b>Detection:</b> Control tower personnel.   |   |          |                     |  |
| <b>Effectiveness Of Monitoring Equipment:</b> Not applicable.  |   |          |                     |  |
| <b>Recovery &amp; Cleanup Actions:</b> 12,200 gallons recovered by defueling the manhole with a defueler. The remaining lost fuel is assumed to have spilled into the environment and soaked into the ground.  |   |          |                     |  |
| <b>Corrections To Prevent Reoccurrence:</b> Corrective training was held for all Maytag personnel. Overrides were re-installed correctly.  |   |          |                     |  |
| <b>Enforcement Action:</b> None.   |   |          |                     |  |

TABLE 4.2 OIL AND HAZARDOUS SUBSTANCE MINOR SPILL HISTORY (&lt;25 GAL)

| DATE    | LOCATION                          | PRODUCT                                  | SPILL VOLUME (GAL)      | IMPACT NAVIGABLE WATER (Y/N) | CAUSE  | DETECTION   | CLEAN UP                            | PREVENTION                                  | ENFORCEMENT ACTION (Y/N) |
|---------|-----------------------------------|--|-------------------------|------------------------------|--|---|-------------------------------------|---|--------------------------|
| 2/23/92 | Hangar 8                          | Aircraft Cleaner                         | 5                       | N                            | Leaking 55 Gallon Drum.                                  | Fuel farm personnel. NAF F.D. notified.             | Speedy-Dry was used.                | Large quantity storage no longer permitted. | N                        |
| 3/15/92 | Near Bldg. 495                    | Oil/Gasoline                             | 1 Oil<br>5 Gasoline     | N                            | Automobile accident rupturing the fuel tank and oil pan. | Base personnel. NAF F.D. notified.                  | Speedy-Dry was used.                | None  | N                        |
| 5/29/92 | A/Gear #2 Runway 216              | JP-5 Fuel                                | 10                      | N                            | Leaking tail section on a T-37 aircraft.                 | Base personnel. NAF F.D. notified.                  | Speedy-Dry was used.                | Regular monitoring of equipment.            | N                        |
| 7/11/92 | BOQ Bldg. 270 parking lot         | Gasoline                                 | 2                       | N                            | A leaky tank.  | Base personnel. NAF F.D. notified.                  | Spill was stopped and contained.    | Regular inspection and monitoring.          | N                        |
| 9/1/92  | Hangar 6 and 7                    | JP-5 Fuel                                | 5                       | N                            | An aircraft vent was leaking.                            | Base personnel. NAF F.D. notified.                  | Spill was contained and cleaned up. | Regular inspection of equipment.            | N                        |
| 9/10/92 | T-Line                            | JP-5 Fuel                                | 20                      | N                            | Fuel leaking from an F-18.                               | Base personnel. NAF F.D. notified.                  | Spill was contained and cleaned up. | Regular inspection of equipment.            | N                        |
| 9/16/92 | Intersection of 8th and A streets | Contaminated oil with water              | 5                       | N                            | Leaking 35-gallon drum that fell off a flatbed truck.    | Facility transport personnel.                       | No action was taken.                | SPCC refresher for personnel.               | N                        |
| 1/4/93  | Auto hobby shop                   | Gasoline and transmission fluid, and oil | 10 Gasoline<br>5 qt Oil | N                            | Automobile leak.   | Facility personnel. NAF F.D. notified.              | Speedy-Dry was used.                | Regular inspection of equipment.            | N                        |
| 2/12/93 | Hangar #2                         | Jet Fuel                                 | 5                       | N                            | An A-6 airplane was leaking.                             | Base personnel. NAF F.D. notified.                  | No information available.           | Regular inspection of equipment.            | N                        |
| 1/27/94 | Hanger #5                         | Smoke oil                                | 10                      | N                            | Blue Angel's tank overfilled.                            | Detected by Sgt. Fannagan who was filling the tank. | Speedy-Dry was used.                | SPCC refresher training for fuelers.        | N                        |

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| DATE    | LOCATION              | PRODUCT                             | SPILL VOLUME (GAL) | IMPACT NAVIGABLE WATER (Y/N) | CAUSE  | DETECTION                          | CLEAN UP   | PREVENTION   | ENFORCEMENT ACTION (Y/N) |
|---------|-----------------------|-------------------------------------|--------------------|------------------------------|--|------------------------------------|--|--|--------------------------|
| 2/10/94 | Main Taxiway          | JP-5                                | 10                 | N                            | Leak from a plane.   | Detected by Fire Dept. dispatcher. | Absorbent was used and was contained in labeled drum.                        | Clay-absorbent will be used in the future. SPCC refresher training to response personnel.          | N                        |
| 3/4/94  | Gas station building  | Diesel fuel                         | 1                  | N                            | Unknown.   | Detected by base personnel.        | Absorbent was used and was contained in labeled drum.                        | No action.   | N                        |
| 5/13/94 | Dumpster at Bldg. 507 | Adhesive - empty joint sealant cans | N/A                | N                            | Illegal disposal by contractor (Bighorn).                                | EPA found cans in the dumpster.    | Residue was cleaned up by the public works contractor.                       | A representative of Falcon General Engineering, Inc. must be present before Bighorn does any work. | N                        |
| 5/19/94 | Not listed            | Sulfuric acid                       | 1 qt               | N                            | Container fell out of the back end of a turning vehicle.                 | Base personnel. NAF F.D. notified. | Baking soda was used. Neutralized material was disposed of in plastic drums. | SPCC refresher for personnel.  | N                        |
| 6/2/94  | Helicopter fuel pad   | JP-5 Fuel                           | 2                  | N                            | Leak from a helicopter onto the fuel pad.                                | Base personnel.                    | Fuel was absorbed and properly disposed of.                                  | Regular equipment inspections.   | N                        |
| 6/10/94 | Hangar 3              | JP-5 Fuel                           | 10                 | N                            | Leaking jet fuel tank.   | Base personnel.                    | Fuel was absorbed and properly disposed of.                                  | Regular equipment inspections.   | N                        |
| 6/10/94 | Hangar 3              | Oil                                 | < 5 qt             | N                            | Improper packing of a PON-6 engine oil pump aboard the bed of a trailer. | NAF el Centro Hazmat Dept. Airman. | Absorbent pads were used.  | Regular equipment inspections.   | N                        |
| 6/13/94 | Not listed            | JP-5 Fuel                           | 4                  | N                            | Fuel filter was broken on a Navy 2-ton truck.                            | Base personnel.                    | Absorbent was used.  | Regular equipment inspections.   | N                        |

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| DATE        | LOCATION                     | PRODUCT                       | SPILL VOLUME (GAL) | IMPACT NAVIGABLE WATER (Y/N) | CAUSE  | DETECTION                              | CLEAN UP                          | PREVENTION   | ENFORCEMENT ACTION (Y/N) |
|-------------|------------------------------|-------------------------------|--------------------|------------------------------|--|--|-----------------------------------|--|--------------------------|
| 8/1/94      | 10 mi from Twenty-Nine Palms | Diesel                        | 20                 | N                            | During maneuvers, a MI A1 lost fuel on incline, which spilled on the ground. | Squadron personnel.                    | Cleanup was performed by Marines. | Regular equipment inspections.                                 | N                        |
| 8/2/94      | Not listed                   | Refrigerator oil              | 0.25               | N                            | Broken oil line.   | Base personnel.                        | Absorbent was applied.            | Regular equipment inspections.                                 | N                        |
| 12/22/94    | Boiler room Bldg. 436        | JP-5 Fuel                     | N/A                | N                            | Fuel spilled from an unlabeled container.                                    | Galley personnel.                      | Not listed.                       | Implement secondary containment. SPCC refresher for personnel. | N                        |
| 1st qtr. 95 | Hangar #5                    | JP-5 Fuel                     | <10                | N                            | Leak from plane #3.  | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections .                                | N                        |
| 1st qtr.    | Hangar #5                    | Smoke oil                     | <5                 | N                            | Not listed.  | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 1st qtr.    | Hangar #5                    | Smoke oil                     | <5                 | N                            | Leak from Blue Angels smoke oil.   | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections. SPCC refresher.                 | N                        |
| 1st qtr.    | Hangar #5                    | JP-5 Fuel                     | 10-20              | N                            | Leak from Solos.   | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 1st qtr. 95 | Hangar #5                    | JP-5 Fuel                     | <5                 | N                            | Leak from Fat Albert.  | Env. personnel on routine inspection . | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 1st qtr. 95 | Hangar #5                    | Blue paint                    | <1                 | N                            | Paint spill.   | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 1st qtr. 95 | Hangar #5                    | Hydraulic fluid<br>Blue paint | <10                | N                            | Leak from plane #5, paint spill.   | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 1st qtr. 95 | Hangar #4                    | JP-5 Fuel<br>Hydraulic fluid  | 10-20              | N                            | Leak from plane #4.  | Env. personnel on routine inspection.  | Not listed.                       | Regular equipment inspections.                                 | N                        |
| 10/5/95     | Hangar #3                    | Jet Fuel                      | 3                  | N                            | Leaking from T-45A.  | Base Personnel.                        |                                   | Regular equipment  | N                        |

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| DATE     | LOCATION                            | PRODUCT    | SPILL VOLUME (GAL) | IMPACT NAVIGABLE WATER (Y/N) | CAUSE                                   | DETECTION                    | CLEAN UP                                  | PREVENTION                     | ENFORCEMENT ACTION (Y/N) |
|----------|-------------------------------------|------------|--------------------|------------------------------|---|------------------------------|---|--------------------------------|--------------------------|
|          |                                     |            |                    |                              |   |                              |   | inspections.                   |                          |
| 10/18/95 | Hangar #6                           | Jet Fuel   | 8                  | N                            | Leaking from F-18.                      | Base Personnel.              | Absorbent pads, used by Hazmat.           | Regular equipment inspections. | N                        |
| 12/6/95  | Hangar #3                           | JP-5 Fuel  | 6                  | N                            | Unknown.                                | Base personnel.              | Hazmat personnel w/absorbent.             | Regular equipment inspections. | N                        |
| 1/25/96  | South of Bldg. 3                    | JP-5 Fuel  | <5                 | N                            | Fuel spill from F-18.                   | Navy Squadron personnel.     | Navy Squadron personnel w/absorbent.      | Regular equipment inspections. | N                        |
| 1/26/96  | Not listed                          | Jet Fuel   | 5-8                | N                            | Fuel spill from F14 external fuel tank. | Base personnel.              | Absorbent pads, used by Fire Dept.        | Regular equipment inspections. | N                        |
| 2/26/96  | Hangar #7                           | JP-5 Fuel  | 15                 | N                            | Hose fitting snapped on boom.           | Base personnel.              | Absorbent used by Hazmat and Maytag.      | SPCC refresher for personnel.  | N                        |
| 2/26/96  | T-Line                              | JP-5 Fuel  | 20                 | N                            | Broken fuel pipe.                       | Base personnel.              | Maytag & Hazmat personnel with absorbent. | Regular equipment inspections. | N                        |
| 3/7/96   | Not listed                          | Antifreeze | 5                  | N                            | Not listed.                             | Not listed.                  | Speedy dry was used.                      | SPCC refresher for personnel.  | N                        |
| 3/8/96   | Hangar #3                           | JP-5 Fuel  | 16                 | N                            | Broken fuel hose on truck.              | Base personnel.              | Maytag personnel used Speedy-Dry.         | Regular equipment inspections. | N                        |
| 4/3/96   | Transmit line for squadron VMFA 242 | JP-5 Fuel  | 0.5                | N                            | Fuel spill from drop tank.              | T-Line notified Hazmat crew. | Absorbent pads were used.                 | SPCC refresher for personnel.  | N                        |
| 4/3/96   | Transit line for squadron VMFA 242  | JP-5 Fuel  | 3                  | N                            | External fuel tank overflow.            | Base personnel.              | Absorbent pads used by Hazmat.            | Regular equipment inspections. | N                        |
| 4/4/96   | Not listed                          | JP-5 Fuel  | <5                 | N                            | F-18 leaking fuel.                      | Base personnel.              | Hazmat personnel used absorbent.          | Regular equipment inspections. |                          |
| 4/4/96   | T-Line                              | JP-5 Fuel  | 10                 | N                            | Fuel spill from F-18.                   | Base personnel.              | Hazmat personnel with absorbent.          | Regular equipment inspections. | N                        |

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| <b>DATE</b> | <b>LOCATION</b> | <b>PRODUCT</b> | <b>SPILL VOLUME (GAL)</b> | <b>IMPACT NAVIGABLE WATER (Y/N)</b> | <b>CAUSE</b>               | <b>DETECTION</b> | <b>CLEAN UP</b>                  | <b>PREVENTION</b>              | <b>ENFORCEMENT ACTION (Y/N)</b> |
|-------------|-----------------|----------------|---------------------------|-------------------------------------|----------------------------|------------------|----------------------------------|--------------------------------|---------------------------------|
| 4/18/96     | Not listed      | JP-5 Fuel      | 4                         | N                                   | Fuel spill from F-18.      | Base personnel.  | Hazmat personnel with absorbent. | Regular equipment inspections. | N                               |
| 6/7/96      | T-Line          | JP-5 Fuel      | 10                        | N                                   | Fuel spill from aircraft.  | Base personnel.  | Hazmat personnel w/absorbent.    | Regular equipment inspections. | N                               |
| 6/7/96      | Not listed      | Jet Fuel       | 3                         | N                                   | Jammed flow valve on pump. | Base personnel.  | Absorbent pads, used by Hazmat.  | Regular equipment inspections. | N                               |
| 8/3/96      | T-Line          | JP-5 Fuel      | 10                        | N                                   | Fuel spill from F-18.      | Base personnel.  | Base personnel w/absorbent.      | Regular equipment inspections. | N                               |

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## 5. ACTIVITY-WIDE SPILL PREVENTION MEASURES

The guidelines contained in 40 CFR 112.7 and discussed in this section govern spill containment structures, storage tank construction, engineered control and alarm systems, drainage control systems and procedures, transfer systems and operations, security measures, and inspection. Additional requirements of this regulation and NAF El Centro's SPCC program include authority and responsibilities (Section 2.0) and training (Section 5.0). These regulations are applicable to all facilities at NAF El Centro that use, store, or handle oil or hazardous substances.

This section establishes procedures and methods, identifies equipment and other features to prevent the discharge of oils and hazardous substances to a navigable waterway, and prescribes recommendations for minimizing the impact of any deficiencies at the Activity level. Facilities with larger-quantity use and storage are described on a site-specific basis in Section 6.0. NAF El Centro personnel should ensure full conformance with these guidelines, follow applicable operating procedures during the handling and transfer of oil products and hazardous substances, and adhere to the required inspection schedules.

Even with the implementation of controls for oil spill prevention, the possibility of oil spills still exists. Therefore, a response plan for oil and hazardous substance spills is still necessary. Annex 1 and 2 of this SPCC present the facility response planning and emergency procedures (e.g., organization, responsibilities, and response procedures) that complement spill contingency planning. In addition, NAF El Centro maintains a trained Oil Spill Response and Cleanup Team within the Hazmat Department.

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## 5.1 SPILL CONTAINMENT STRUCTURES

Appropriate containment structures include dikes, berms or retaining walls, curbing, drainage systems, barriers, retention ponds or spill diversion ponds, or absorbent materials. Dikes should be sufficiently impervious to prevent leaks or discharges. It is recommended that containment areas be paved with an impervious material. Secondary containment for bulk storage facilities should be large enough to hold the contents of the largest single tank, plus sufficient freeboard for rainfall. To allow for precipitation, walls of secondary containment structures should be 1 foot taller than that required to contain the volume of the tank or the local 100-year, 6-hour rainfall, whichever is greater (NEESA, 1988). Secondary containment for tank car and tank truck loading and unloading areas must be designed to hold the maximum capacity of any single compartment of a tank car or truck loaded or unloaded at the facility at a minimum.

## 5.2 STORAGE TANK CONSTRUCTION

Selection of appropriate materials of construction for oil and hazardous substance storage tanks ensures that the material is compatible with the stored contents. Buried and partially buried metallic storage tanks represent a potential for undetected spills or leakage and should be avoided unless the buried section of the shell is adequately protected against corrosion. Subpart D of 40 CFR 280, and Subpart J of 40 CFR 265 (Tank Systems), discuss the Federal requirements for storage tank construction and the use of double-walled containment for hazardous waste and petroleum storage tanks. Title 8, Chapter 7, and Title 23, Chapter 16, of the CCR, discuss the state requirements for AST systems. ASTs, tank supports, and foundations should be tested or inspected periodically and the records of inspection should be retained for the purpose of comparison. Periodic integrity testing of tanks must address tank design (e.g., floating roof) and hydrostatic testing, visual inspection, or non-destructive shell thickness testing. The NAF EI Centro Environmental Division should, on a regular basis, observe the outside of tanks for signs of deterioration, leaks which might cause a spill, or accumulation of oil in diked areas. Visual leaks should be promptly corrected.

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### 5.3 ENGINEERED CONTROL AND ALARM SYSTEMS

To reduce the potential for oil spills from large tanks and tanker trucks, engineered control and alarm systems should be considered by the Environmental Division. Some of the systems that can provide spill or leak protection include high-level alarms, high-level pump cut-off systems, and liquid level sensors and indicators. An interlocked warning light or physical barrier system or warning signs should be provided in tanker truck loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines is accomplished.

### 5.4 DRAINAGE CONTROL SYSTEMS AND PROCEDURES

Most significant spill scenarios at NAF El Centro would involve an oil or hazardous substance release entering the stormwater system through a storm drain and then flowing through an outfall to a drainage canal and into the New River (Figure 4). Therefore, preventing spills from entering the storm drains is a primary consideration of this plan. Spills originating on or reaching permeable surfaces have the potential to migrate downward through the soil, possibly impacting groundwater.

NAF El Centro identified surface drainage patterns and storm water system conditions in the Storm Water Discharge Management Plan, dated August 1997. A description of identified sub-basins, locations with "significant" materials, and existing/recommended controls for NAF El Centro were documented. Specific drainage patterns are noted in the site-specific plans discussed in Section 6.0 of this SPCC.

According to 40 CFR 112.7(e)(2)(iii), a discharge from the secondary containment of an oil storage or transfer facility to an open water course, lake or pond, including the discharge of rainwater from a diked area, may be acceptable under certain conditions where: (1) the drainage control valve(s) is normally sealed closed; (2) accumulated liquids are inspected to ensure compliance with water quality standards; (3) the discharge

Drainage Map

will not produce a film, sheen, or discolor the surface of the receiving water, and the discharge will not cause a sludge or emulsion to form in the water; and (4) the drainage must occur under responsible supervision and adequate records of discharges must be maintained. The Secondary Containment Discharge Record (Figure 5) includes: (1) any observation of oil on the water surface of the outlet structures; (2) time the valve was opened and closed; (3) the date; (4) the name of the operator; and (5) the approximate volume of discharge.

Drainage from containment or diversionary structures should be restrained by valves or other positive closure means. Flapper-type drain valves must not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as practicable, be of manual, open-and-closed design. Pumps or ejector systems that serve diked areas should require manual operation.

## 5.5 TRANSFER SYSTEMS AND OPERATIONS

Transfer systems, such as aboveground and underground piping must conform with the SPCC program requirements contained in 40 CFR 112.7(e)(3). These requirements include:

- Underground buried piping systems should be protected from corrosion and aboveground piping systems should be inspected on a regular basis. In some cases, regular pressure testing of piping systems may be warranted.
- Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.
- When a pipeline is not in service, or in standby service for an extended period of time, the terminal connection at the transfer point should be capped or blank-flanged, and marked as to the origin.

In addition to meeting the requirements of spill containment (Section 5.1) and engineered control and alarm systems (Section 5.3), and the minimum requirements established by

the DOT, tank car and truck loading operations must meet the SPCC operational requirements contained in 40 CFR 112.7(e)(4). These requirements include the following:

- Vehicular traffic allowed on the facility should be warned verbally, or appropriate signs should ensure that the vehicle, because of its size, will not endanger aboveground piping.
- Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent leakage while in transit.

Figure 6 contains general loading and unloading procedures that should be followed during the transfer of fuel from the 8,000-gallon tank trucks and 1,500-gallon maintenance tank truck, and any other truck.

## 5.6 INSPECTIONS AND RECORDS

Self inspections, testing, and record keeping are required to ensure conformance with the requirements of the SPCC Program. The Environmental Division is responsible for ensuring SPCC Program conformance. In addition, they review all new construction projects and facility modifications to determine if the SPCC Plan requires modification or amendments. The Environmental Division will also conduct an annual inspection of NAF El Centro facilities to assess compliance with the requirements of this plan and implementation of the recommendations. The Environmental Division will document and maintain records of each inspection. The frequency of inspections may be greater for some facilities and is dependent on several factors. These factors include:

- Types of materials stored,
- Types of operation,
- Frequency of operation,
- Equipment age and condition,
- Record of past spills and leaks,
- Facility layout, and
- Potential for environmental damage.

The inspection records should be made part of this plan and should be maintained for a period of three years. A description of SPCC-related inspections, testing schedules, and record-keeping requirements for NAF El Centro is included in Annex 2.

## 5.7 SECURITY MEASURES

Facilities must conform with the security guidelines established in 40 CFR 112.7(e)(9).

These guidelines include the following:

- All facilities handling, processing, and storing oil must be fully fenced, and entrance gates must be locked and/or guarded when the facility is not in production or is unattended.
- The master flow and drain valves and any other valves that would permit direct outward flow of the tank's content to the surface should be securely locked in a closed position when in non-operating or in standby status.
- The starter control on oil pumps must be locked in the "off" position or located at the site accessible only to authorized personnel when the pumps are in non-operating or in standby status.
- The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or in standby service for an extended period of time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or inert gas pressure.
- All outside storage areas should be adequately lighted to discourage vandalism and to aid in the early detection and cleanup of spills.

A summary of the Activity-wide security is presented in Table 5.1. Site-specific security for the SPCC program facilities is described in the site-specific plans in Section 6.0 of this plan.

| TABLE 5.1: SECURITY MEASURES AT NAF EL CENTRO |   |
|---|---|
| LOCATION OF SECURITY MEASURES                 | DESCRIPTION OF SECURITY   |
| PERIMETER ACTIVITY FENCING                    | NAF El Centro is secured on the perimeter with chain link fencing. There is one manned entrance to the Activity, the main gate at Bennett Road, which is manned 24 hours by the Security Department. An unmanned east gate exists north of the fuel farm. Security personnel ensure that the perimeter fence is intact and that only authorized personnel are allowed through the gate. |
| ACTIVITY SECURITY PATROLS                     | Security personnel perform regular patrols 24 hours per day, seven days per week. The single entrance gate is manned by security guards at all times.   |
| ACTIVITY LIGHTING                             | There is adequate lighting for security purposes throughout the Activity.   |
| STORAGE FACILITY FENCING                      | Large quantity storage facilities are typically fenced.   |
| TRANSFER FACILITY FENCING                     | Transfer operations are typically confined to the airfield, including the jet fueling area and the direct fueling area. The airfield is secured with a chain link fence. There are a number of controlled-access gates on the south and west sides of the airfield to provide access.   |
| SECURITY AT FACILITIES                        | Activity personnel typically provide security for the various storage facilities during the operation hours of 0700 to 1530 by performing inspections and locking doors and valves. The inner and outer perimeter patrols for the Activity periodically check these facilities both during and after operational hours.   |
| EMERGENCY CUT-OFF LOCATIONS                   | Manual shutoff valves are located in the immediate vicinity of each of the tanks.   |

Last Updated: September 1999

## 5.8 TESTING

In addition to inspections, SPCC regulations (40 CFR 112.7 (e)) require testing: integrity testing of ASTs, operational testing of liquid sensing devices on all bulk storage tanks, and pressure testing of pipelines in areas where area drainage is such that a failure might lead to a spill event.

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## 5.9 TRAINING, DRILLS AND EXERCISES, AND DOCUMENTATION

Training related to emergency preparedness at NAF El Centro and required of Facility Response Planning (40 CFR 112) and OSHA (29 CFR 1910.120) consists of two programs: incident command and response/materials handling. Employee training programs instill in personnel at all levels responsibility, complete understanding of the spill prevention program, spill response, and the processes and materials with which they work, as well as general safety comprehension. These programs are described in the following sections.

This training requirement is the responsibility of first-line managers or supervisors at each facility that stores, uses, or handles oil or hazardous substances. Training records will be maintained for all facility personnel until closure of the facility for current staff or for at least 3 years (Table 5.3).

To prevent the discharges of oil and hazardous substance and to ensure compliance with applicable pollution control laws, rules, and regulations, NAF El Centro instructs the operating personnel in the proper use and maintenance of equipment (40 CFR 112.7(e)(10)). Spill prevention briefings for operating personnel are scheduled and conducted at intervals frequent enough to assure adequate understanding of the SPCC Plan for their area. Such spill prevention briefings highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures. Personnel are trained in pollution control laws, rules and regulations, and in the operation and maintenance of equipment through continuing on-the-job training. Each area also conducts spill prevention briefings. The Facility Personnel SPCC Training Requirements are listed in Table 5-2.

| TABLE 5.2: FACILITY PERSONNEL SPCC TRAINING REQUIREMENTS   |   |
|--|---|
| TYPE OF TRAINING   | MINIMUM TRAINING REQUIRED   |
| INITIAL TRAINING<br>(UPON ASSIGNMENT TO PERFORM DUTIES AT A FACILITY THAT STORES, USES, OR TRANSFERS OIL OR HAZARDOUS SUBSTANCES)  | <ul style="list-style-type: none"> <li>A requirement to read and understand the pertinent SPCC sections,</li> <li>A discussion of all procedures and requirements in Sections 5 and 6 and, as they apply to the employee's job;</li> <li>A review and discussion of past spills (Section 4) that relate to potential causes of spills in the new employee's job;</li> <li>A discussion of spill reporting and emergency response procedures (Annex 1 &amp; 2); and</li> </ul> <p>An acknowledgment by the employee that failure to comply with Navy and federal regulations concerning oil and hazardous substance spill prevention and control may result in adverse action against the employee, including disciplinary action, suspension, or termination, depending on the circumstances.</p>   |
| FOLLOW-UP TRAINING<br>(ANNUAL REFRESHER FOR INITIAL TRAINING REQUIREMENTS)   | <ul style="list-style-type: none"> <li>A review of the pertinent SPCC, including procedures and requirements in Sections 5 and 6 and, which are related to the employee's job responsibilities;</li> <li>A discussion of spills since the last review to illustrate the need for proper procedures;</li> <li>A review of spill reporting and emergency response procedures (Annex 1 &amp; 2);</li> <li>An opportunity for employee feedback on conditions in their specific work area, including discussions of the results of any inspections relative to spill prevention;</li> <li>A reaffirmation by the employee of his/her understanding of the SPCC program and the possible ramifications of noncompliance with spill prevention procedures; and</li> </ul> <p>A discussion of hazardous materials the employee will be in contact with and locations of MSDSs.</p> |
| <p>This SPCC training would be in addition to the requirements of 29 CFR 1910.120, as 29 CFR 1910.120 is required. However, SPCC training may be incorporated into the OSHA training, as appropriate. This SPCC training alone does not satisfy the requirements of 29 CFR 1910.120.</p> <p>All personnel (except skilled support and specialist employees) must have ANNUAL refresher training or demonstration of competency (no minimum number of hours is stated).</p> |   |



**FIGURE 5**

| <b>Secondary Containment Discharge Record</b>                  |                               |
|--|-------------------------------|
| <b>Date:</b>   | <b>Inspector:</b>             |
| <b>1. Condition of water surface in secondary containment:</b> |                               |
| <b>2. Time of valve opening:</b>                               | <b>Time of valve closure:</b> |
| <b>3. Approximate volume of discharge:</b>                     |                               |
| <b>4. Comments:</b>  |                               |

**FIGURE 6****GENERAL LOADING/UNLOADING PROCEDURES**

Ensure that tank car, tank truck, and vessel loading/unloading procedures meet the minimum requirements and regulations established by the Department of Transportation.

- Load and unload tank vehicles in approved locations only. Verify that spill containment structures surround loading and unloading areas.
- Prior to material transfer, check to make sure that the loading/unloading vehicle and transfer lines are located within a containment system, or over a drain or on a sloped pavement that will drain to a containment system.
- Prior to material transfer, inspect all storage tank flanges, joints, connections, and outlets for evidence of cracks and other sources of leakage. Tighten, adjust, or replace as necessary prior to any filling operation.
- Prior to material transfer, visually check all hoses for leaks and wet spots.
- Prior to material transfer, check the pumping circuit and verify the proper alignment of valves.
- Verify that sufficient volume is available on the storage tank or truck to receive the product to be pumped.
- Properly lock in the closed position all drainage valves in the secondary containment structure.
- Secure the loading/unloading vehicle prior to transfer operations with physical barriers such as wheel chocks, warning signs, and interlocks to safeguard against accidental movement and rupture of transfer lines. Make sure that parking brakes on tank trucks or tank cars are set.
- Establish adequate bonding/grounding, of the tanker truck before connecting to the fuel transfer point.
- Keep hose ends tightly capped while moving hoses into position.
- When loading, keep the internal and external valves on the receiving tank open along with the pressure relief valves.

- When transferring Class 1 (flammable) liquids, shut off motors of auxiliary or portable pumps during making and breaking hose connections.
- Make sure that communication is maintained with the pumping and receiving stations at all times.
- During transfer operation, periodically inspect the condition of bonding/grounding.
- Monitor all hose couplings during transfer operations.
- Monitor the liquid level in the receiving tank during filling operations to prevent overflow.
- Keep a log during the operation to record time and receiving tank soundings to ensure that all the product pumped is being transferred to the receiving tank and is not leaking at other points throughout the pumping circuit.
- Monitor flow meters to determine rate of flow during loading and unloading operations.
- Reduce flow rate while topping off the tank to provide sufficient reaction time for pump shutdown without overflow of the receiving tank.
- Never completely fill the receiving tank when loading oils; provide a minimum of one percent ullage to prevent leakage due to thermal expansion.
- Upon completion of transfer operations, close all tank and loading valves before disconnecting.
- Upon completion of transfer operations, securely close all vehicle internal, external, and dome-cover valves before disconnecting.
- Make sure that all material transfer operations are complete before disconnecting any transfer lines.
- Secure all hatches.
- After hatches have been secured, disconnect grounding/bonding wires.
- Remove any wheel chocks that have been used.
- Prior to vehicle departure, make sure that all connections, fill lines, and grounding/bonding wires are disconnected.

- After the transfer lines are disconnected and prior to vehicle departure, inspect the outlets for evidence of leakage.
- On completion of the transfer operation, make sure that the hoses or other connecting devices are drained, vented, blown down, or blown out with inert gas to remove the remaining oil before moving them away from their connections.
- Use a drip pan when breaking a connection.
- Cap the end of the hose or other connecting devices before moving them to prevent uncontrolled oil leakage.
- Disconnect, drain and support out-of-service or standby hoses to avoid crushing or excessive strain.
- Cap associated hose risers.
- Close all hose riser valves not in use.

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## SPECIFIC TANK TRUCK PROCEDURES

In addition to the general procedures in Section I, the following procedures also apply to tank truck loading and unloading:

- Inspect the vehicle for defects prior to commencing a product flow. Typical areas warranting inspection on a truck are brake hoses, couplers, valves, wells, and bearings, and all sections of the undercarriage. Closely examine the lowermost drain and all outlets of any tank truck for leakage or defects; if necessary, properly tighten, adjust, or replace to prevent liquid leakage while in transit.
- Periodically inspect the condition of the alligator clips, especially the joint between the bonding wire and the clip, to ensure effective bonding circuits.
- During the transfer of Class 1 (flammable) liquids, shut off motors of the tank truck when making and breaking hose connections. If loading or unloading is done without requiring the use of the motor for the tank truck, keep the motor shut off throughout the transfer operation of the liquid.
- The driver, operator, or attendant of a tank truck should not remain in the vehicle, and should not leave the vehicle unattended during the loading or unloading process.

## CONTAINMENT AREA DRAINING OPERATIONS

Drain the spill containment area periodically to remove accumulated rainwater to prevent loss of spill containment capacity. Also drain a containment area following a discharge.

When draining the containment area, follow this procedure:

- Prior to draining a containment area, check the water for oil sheen. If small amounts of oil are present, drain contaminated water to an oil-water separator or use sorbent mats.
- If significant quantities of oil are present, alert supervisor and determine if a discharge has occurred.
- Supervisor must determine whether to drain the material to an oil/water separator or to pump out for recycling/reclaiming.
- Check exposed piping, hoses, and connections before draining.
- Obtain supervisors permission before draining the containment area.

- Set timer to alert operator at the end of expected drain period.
- Do not begin draining operations near the end of a work shift.
- Keep a log showing the time of opening and closing of the drain valve, amount of material drained, and the operator's signature verifying that the drain valve was locked after closing.

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## TANK WATER DRAINING PROCEDURES

### General Operating Procedures

- Monitor the tank draining operation constantly.
- Make sure that the valves are piped into spill drainage systems leading to impoundments or containers.
- Keep water drain valves locked in a closed position when not in service.
- Pipe these valves into spill drainage systems leading to impoundments or containments.
- Ensure that the opening and closing of the valves is done under strict authority.
- Make frequent inspections of the valves to ensure that the security of the valves has not been violated in any way.

### Other

When draining water from a tank, follow these steps:

- Close the outside valve and open the water drain valve (the inner and outer) to drain oil from the system into a portable container through the sampling valve.
- When water appears at the sampling valve, partially open the outside valve and partially close the sampling valve.
- Drain water until oil appears; then close the inner valve of the water drain valve and the outside valve; keep the outer valve of the water drain valve opened to drain the water from the valve and its piping through the sampling valve, until there is no more water.
- Close the outer valve of the water drain valve and lock the water drain valve.
- Close the sampling valve; make sure that all valves are closed.

## **6. SITE-SPECIFIC SPILL PREVENTION, CONTROL AND COUNTERMEASURES PLANS**

This section addresses 58 facilities at NAF El Centro that require an Oil and Hazardous SPCC Plan. The site-specific information is an update of the Oil Spill Prevention, Control, and Countermeasures Plan, Naval Air Facility El Centro, CA, prepared by CDM Federal in 1997, as required by 40 CFR 112. The locations of the 58 facilities are presented in Figure 7. Site point-of-contact information is listed in Annex 1 Table 1.2.

An updated summary of ASTs, drum storage areas, and waste accumulation points is presented in Table 6.1. Table 6.2 summarizes the capacity and type of secondary containment at the tank sites. Data recorded in Tables 6.1 and 6.2 are a compilation of information obtained through Activity-wide facility surveys conducted during March 1999. The field surveys were targeted at evaluating applicable facilities, procedures, and programs regarding the handling and storage of oil and hazardous substances at NAF El Centro. The surveys also determined what variations and modifications had been made to the facility, as well as which recommendations from the previous reporting had been implemented.

The most significant finding, other than the construction of new fueling facilities, was that the quantities of oil or hazardous substances stored at many of these facilities had been significantly reduced from the previous reporting. This reduction in inventory is a result of implementation of a centralized product distribution system or Consolidated Hazmat Reutilization Implementation Management Program (CHRIMP). The Hazmat Department facilitated this inventory reduction. With few exceptions, only daily-use quantities of oil and hazardous substances are distributed to Activity personnel. Waste accumulated at the facilities is picked up weekly by the Hazmat.

For the purposes of this report, only those facilities that use, store, or handle oil or hazardous substances in quantities greater than threshold quantities established by the State of California (55 gallons for a liquid, 500 pounds for a solid, and 200 cubic feet [at standard temperature and pressure] for a compressed gas) are discussed in the site-

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specific analysis. A hazardous substance is defined as any solution or mixture containing those substances listed as hazardous in 40 CFR 116. In accordance with this regulation, a hazardous substance can be considered any material which is toxic, corrosive, reactive, flammable, a strong sensitizer, an irritant, or generates pressure through decomposition, heat, or other means, if such a substance can cause personal injury or illness from handling. Those facilities that use or store quantities of these materials below the threshold values (not regulated under SPCC requirements) are summarized in Table 6-3.

The site-specific evaluations present a facility description, storage quantities and containers, containment, transfer operations, drainage control measures, spill potential, security measures, facility administration, and recommendations. A site map of each facility is included in Section 6 by building number.

In general, the majority of the recommendations from previous SPCC reporting were implemented or addressed. Recommendations resulting from the 1998/1999 reporting activity are presented at the end of each facility description and are summarized in Table 6-4.

Regarding spill response, the Hazmat Department, located in Building 512, manages the spill response trailer for responding to oil or hazardous substance spills. A variety of spill response equipment is contained in the trailer, as described in Annex 1. In the event of a larger spill, heavy equipment (bulldozer, front-end loader, etc.) is located in the Brown & Root Services Corporation yard (Building 145 complex).

## Site specific SPCC Facility Location Map

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY

| BUILDING NUMBER            | SPCC SITE NO. | BUILDING ACTIVITY                  | TANK NUMBER                    | VOLUME (Gallons)                     | CONTENTS  | DESCRIPTION                                      | DIRECTION OF SPILL   |
|----------------------------|---------------|------------------------------------|--------------------------------|--------------------------------------|---|--|--|
| <b>OIL TANK FACILITIES</b> |               |                                    |                                |                                      |   |  |  |
|                            | 1             | Fuel Farm (Post-1998)              | 701<br>702<br>617<br>618 (720) | 792,000<br>792,000<br>5,000<br>5,000 | JP-5<br>JP-5<br>Off-Spec Fuel<br>JP-5 (Stripping) | AST-steel<br>AST-steel<br>AST-steel<br>AST-steel | To secondary containment<br>To secondary containment<br>To secondary containment<br>To secondary containment |
|                            | 2             | Jet Fueling Areas (tank trucks)    |                                | 8,000 per truck (5 - 8 trucks)       | JP-5  | Mobile Tanks - steel                             | To airfield apron secondary containment or loading area secondary containment                                |
|                            | 2             | Jet Fueling Areas (direct fueling) | 801<br>802<br>803              | 30,000<br>30,000<br>2,900            | JP-5<br>JP-5<br>JP-5 (Recovery)                   | AST-steel<br>AST-steel<br>AST-steel              | To secondary containment<br>To secondary containment<br>To secondary containment                             |
| 165                        | 12            | Truck Maintenance                  |                                | 80<br>240                            | Transmission Oil<br>Motor Oil                     | AST-steel<br>AST-steel                           | To secondary containment pan (inadequate containment) and possibly to asphalt parking area                   |
| 200                        | 14            | NEX Service Station                |                                | 10,000<br>10,000                     | Unleaded<br>Unleaded                              | AST-steel<br>AST-steel                           | To secondary containment<br>To secondary containment   |
| 220                        | 19            | Smoke Oil Tank                     |                                | 5000                                 | Smoke Oil   | AST-steel  | To secondary containment   |
| 286                        | 24            | Wells Air Start-North              |                                | 100<br>5                             | Water/Oil<br>Waste<br>Oil                         | AST-steel<br>5-gal bucket (plastic)              | To metal secondary containment cell<br>To concrete containment curbing                                       |
| 400                        | 31            | Government Service Station         |                                | 10,000<br>10,000                     | Unleaded<br>Diesel                                | AST-steel<br>AST-steel                           | To secondary containment<br>To secondary containment   |
| 575                        | 55            | Wells Air Start-South              |                                | 100<br>5                             | Water/Oil<br>Waste<br>Oil                         | AST-steel<br>5-gal bucket (plastic)              | To metal secondary containment pan (tank also located with airfield apron containment curbing)               |

Note: Excludes Emergency Generator Tanks.

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY (CONTINUED)

| BUILDING NUMBER                        | SPCC SITE NO. | BUILDING ACTIVITY      | TANK NUMBER         | VOLUME (Gallons) | CONTENTS           | DESCRIPTION            | DIRECTION OF SPILL   |
|--|---------------|------------------------|---------------------|------------------|--------------------|------------------------|--|
| EMERGENCY GENERATORS (WITH FUEL TANKS) |               |                        |                     |                  |                    |                        |  |
| 116                                    | 4             | Sewage Lift Station    | Emergency Generator | 110              | Diesel             | AST-steel              | To secondary containment   |
| 120                                    | 5             | Sewage Treatment Plant | Emergency Generator | 110              | Diesel             | AST-steel              | To secondary containment (double-walled tank)                    |
| 125                                    | 6             | Airfield Lighting      | Emergency Generator | 110              | Diesel             | AST-steel              | To the soil  |
| 130                                    | 9             | Control Tower          | Emergency Generator | 110              | Diesel             | AST-steel              | To secondary containment (double-walled tank)                    |
| 137                                    | 10            | Fire Station           | Emergency Generator | 250              | Diesel             | AST-steel              | To metal secondary containment cell                              |
| 201                                    | 15            | Navy Exchange          | Emergency Generator | 50<br>50         | Gasoline<br>Diesel | AST-steel<br>AST-steel | To secondary containment   |
| 210                                    | 17            | Commissary             | Emergency Generator | 10               | Diesel             | AST-steel              | To the soil  |
| 230                                    | 22            | Auxiliary Beacon       | Emergency Generator | 110              | Diesel             | AST-steel              | To secondary containment (double-walled tank)                    |
| 285                                    | 23            | Emergency Generator    | Emergency Generator | 110              | Diesel             | AST-steel              | To secondary containment   |
| 315                                    | 25            | Emergency Generator    | Emergency Generator | 110<br>110       | Diesel<br>Diesel   | AST-steel<br>AST-steel | To secondary containment (inadequate containment) or to the soil |
| 333                                    | 26            | Pumping Station        | Emergency Generator | 110              | Diesel             | AST-steel              | To the soil  |
| 350                                    | 27            | Water Control/Lab      | Emergency Generator | 120              | Diesel             | AST-steel              | To the soil  |
| 433                                    | 32            | Emergency Generator    | Emergency Generator | 100              | Diesel             | AST-steel              | To secondary containment   |
| 446                                    | 34            | Sewage Lift Station    | Emergency Generator | 100              | Diesel             | AST-steel              | To secondary containment   |
| 459                                    | 35            | Sewage Lift Station    | Emergency Generator | 200              | Diesel             | AST-steel              | To the bermed floor (adequate to contain spills)                 |
| 490                                    | 37            | Emergency Generator    | Emergency Generator | 200              | Diesel             | AST-steel              | To the soil  |
| 492                                    | 38            | Radar Equipment        | Emergency Generator | 100              | Diesel             | AST-steel              | To secondary containment   |
| 523                                    | 48            | Medical/ Dental Clinic | Emergency Generator | 600              | Diesel             | AST-steel              | To secondary containment   |

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY (CONTINUED)

| BUILDING NUMBER | SPCC SITE NO. | BUILDING ACTIVITY            | TANK NUMBER         | VOLUME (Gallons) | CONTENTS  | DESCRIPTION             | DIRECTION OF SPILL  |
|-----------------|---------------|------------------------------|---------------------|------------------|---|-------------------------|---|
| 528             | 50            | Special Warfare              | Emergency Generator | 110              | Diesel  | AST-steel               | To secondary containment  |
| 533             | 52            | Deluge Pump House            | Emergency Generator | 110              | Diesel  | AST-steel               | To secondary containment  |
| 554             | 53            | Sewage Lift Station          | Emergency Generator | 40               | Diesel  | AST-steel               | To the soil   |
| 567             | 54            | Emergency Generator          | Emergency Generator | 200              | Diesel  | AST-steel               | To secondary containment  |
| 609             | 56            | Fuel Farm Control            | Emergency Generator | 40               | Diesel  | AST-steel               | To secondary containment  |
| 619             | 57            | Emergency Generator          | Emergency Generator | 200              | Diesel  | AST-steel               | To secondary containment or to the concrete floor (bermed to contain spills)                                    |
| BOS Yard        | 13            | Emergency Generator Portable | Emergency Generator | 110              | Diesel  | AST-steel               | To the soil   |
| DRUMMED OIL     |               |                              |                     |                  |   |                         |   |
|                 |               |                              |                     |                  |   |                         |   |
| 165             | 12            | Truck Maintenance            |                     | 235              | Motor Oil, Antifreeze, Transmissi on Oil, Hydraulic Fluid | 35- and 55-gallon drums | To secondary containment pan (inadequate containment) or possibly to the concrete floor or asphalt parking area |
| 222             | 20            | Ground Support Equipment     |                     | 165              | Degreaser   | 55-gallon drums         | To secondary containment  |
| 362             | 29            | Hobby Shop                   |                     | 55               | Used Motor Oil  | 55-gallon drum          | To secondary containment (when used) or possibly to the soil  |
| 509             | 43            | Dyncorp Storage              |                     | 440              | Motor Oil, Hydraulic Fluid                                | 55-gallon drums         | To the secondary containment pallets  |
| 512             | 44            | Hazmat Supply                |                     | 550              | Motor Oil, Antifreeze, Hydraulic Fluid, Greases, Used Oil | 55-gallon drums         | To secondary containment  |
| 519             | 47            | Transient Line Operations    |                     | 165              | Motor Oil, Hydraulic Fluid, Antifreeze                    | 55-gallon drums         | To secondary containment  |

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY (CONTINUED)

| BUILDING NUMBER        | SPCC SITE NO. | BUILDING ACTIVITY           | TANK NUMBER | VOLUME (Gallons) | CONTENTS  | DESCRIPTION                              | DIRECTION OF SPILL                                      |
|------------------------|---------------|-----------------------------|-------------|------------------|---|--|---|
| LARGE QUANTITY STORAGE |               |                             |             |                  |   |  |   |
| 204                    | 16            | LOX/LN Storage              |             | 2000<br>4000     | Liquid Nitrogen<br>Liquid Oxygen  | 1000-gallon tanks<br>2000-gallon tanks   | To the concrete and gravel containment sumps            |
| 350                    | 27            | Water Treatment             |             | 1600             | Liquid Chlorine   | AST-steel (pressure)                     | To secondary containment                                |
| 351                    | 28            | Water Treatment-Mixing Area |             | 500<br>500       | Aluminum Sulfate<br>Polymer   | AST-fiberglass<br>AST-fiberglass         | To secondary containment<br>To secondary containment    |
| 362                    | 29            | Hobby Shop                  |             | 300              | Propane   | AST-steel                                | To the air  |
| 508                    | 42            | Dyncorp Scrub/Blast/Paint   |             | 55               | Hydrogen Peroxide   | 55-gallon drum                           | To the wash bay drain (self-contained recycling system) |
| 512                    | 44            | Hazmat Supply               |             | 550              | Fire-Fighting Foam, Adhesive, Paints, Acids Thinners, Hydroxide, Alcohol, Detergents, Batteries | Various size drums, cans, bottles, tubes | To secondary containment                                |
| 519                    | 47            | Transient Line Operations   |             | 165              | Paint, Descalant  | Various 1-to 55-gallon containers        | To secondary containment                                |

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY (CONTINUED)

| BUILDING NUMBER                    | SPCC SITE NO. | BUILDING ACTIVITY          | TANK NUMBER | VOLUME (Gallons) | CONTENTS                                      | DESCRIPTION                   | DIRECTION OF SPILL   |
|------------------------------------|---------------|----------------------------|-------------|------------------|---|-------------------------------|--|
| HAZARDOUS WASTE ACCUMULATION AREAS |               |                            |             |                  |   |                               |  |
| 112                                | 3             | Hangar 3                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5, and Paint  | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 127                                | 7             | Hangar 2                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5, and Paint  | 35- and 55-gallon drums       | To locker's secondary containment (also within airfield apron containment)     |
| 128                                | 8             | Strike Fighter Maintenance |             | 55               | Waste Oils, Hydraulic Fluid, JP-5, and Paint  | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 157                                | 11            | Maintenance/Mechanical     |             | 110              | Waste Oils, JP-5                              | 15-, 35-, and 55-gallon drums | To the locker's secondary containment  |
| 165                                | 12            | Truck Maintenance          |             | 110              | Waste Oils, Coolant, Paint                    | 35- and 55-gallon drums       | To the locker's secondary containment  |
| 218                                | 18            | Hangar 4                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5             | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 222                                | 20            | Ground Support Equipment   |             | 110              | Waste Oils, Coolant, Oil Filters              | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 225                                | 21            | Hangar 5                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5             | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 362                                | 29            | Hobby Shop                 |             | 110              | Waste Oils, Coolant, Paint                    | 35- and 55-gallon drums       | To the locker's secondary containment  |
| 502                                | 39            | Hangar 7                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5             | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 503                                | 40            | Hangar 8                   |             | 55               | Waste Oils, Hydraulic Fluid, JP-5             | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |
| 508                                | 42            | Dyncorp Scrub/Blast/Paint  |             | 110              | Waste Oils, Hydraulic Fluid, Fuels, and Paint | 35- and 55-gallon drums       | To the locker's secondary containment  |
| 512                                | 46            | Car Wash                   |             | 110              | Waste Sludge                                  | 55-gallon drum                | To the locker's secondary containment  |
| 517                                | 46            | Weapons Shop               |             | 35               | Waste Oils, Paint                             | 55-gallon drum                | To the locker's secondary containment  |
| 519                                | 47            | Transient Line Operations  |             | 70               | JP-5  | 35- and 55-gallon drums       | To the locker's secondary containment (also within airfield apron containment) |

TABLE 6.1: SPCC PROGRAM FACILITY SUMMARY (CONTINUED)

| BUILDING NUMBER                    | SPCC SITE NO. | BUILDING ACTIVITY            | TANK NUMBER | VOLUME (Gallons) | CONTENTS  | DESCRIPTION  | DIRECTION OF SPILL   |
|------------------------------------|---------------|------------------------------|-------------|------------------|---|--|--|
| HAZARDOUS WASTE ACCUMULATION AREAS |               |                              |             |                  |   |  |  |
| 524                                | 49            | Hangar 8                     |             | 55               | Waste Oils, Hydraulic Fluid, JP-5   | 35- and 55-gallon drums  | To the locker's secondary containment (also within airfield apron containment) |
| 530                                | 51            | Hazardous Waste Storage Area |             | 5000             | Waste Oils, Hydraulic Fluids, Paints, Solvents, Fuels, Acids, Contaminated Dirt | 35- to 55-gallon drums, and larger storage units (tri-lock bins) | To the secondary containment system  |

| TABLE 6.2: OIL STORAGE TANK FACILITIES PRESENTING SPILL RISKS –SECONDARY CONTAINMENT |                |  |
|--|----------------|--|
| TANK NO OR BUILDING LOCATION   | CAPACITY (gal) | CONTAINMENT TYPE   |
| Bldg. 116  | >110           | Metal secondary containment (with valve)   |
| Bldg. 120  | <110           | Double-walled AST (with valve)   |
| Bldg. 125  | >110           | Metal secondary containment (with valve)   |
| Bldg. 130  | <110           | Double-walled AST (with valve)   |
| Bldg. 137  | >250           | Metal secondary containment pan (with valve)   |
| Bldg. 165  | <80 and <240   | Metal trays (pallets); inadequate secondary containment                                      |
| Bldg. 200  | > 11,000       | Concrete wall (with valve)   |
| Bldg. 201  | >50            | Metal secondary containment pan  |
|  | >50            | Metal secondary containment pan  |
| Bldg. 210  | <10            | No secondary containment   |
| Bldg. 220  | > 5,000        | Metal secondary containment cell (with valve)  |
| Bldg. 230  | >110           | Metal secondary containment cell in base of generator (with valve)                           |
| Bldg. 285  | >110           | Metal secondary containment cell (with valve)  |
| Bldg. 286  | >100           | Metal secondary containment pan  |
|  | <5             | No secondary containment (but inside flight line containment curbing)                        |
| Bldg. 315  | 500            | Concrete wall (with valve)   |
| Bldg. 333  | <110           | No secondary containment   |
| Bldg. 350  | <120           | No secondary containment   |
| Bldg. 400  | >10,000        | Concrete wall (with valve)   |
| Bldg. 433  | 100 (est)      | Metal containment cell on concrete pad (with valve)  |
| Bldg. 446  | 110 (est)      | Metal containment cell on concrete pad (with valve) and covered                              |
| Bldg. 459  | >200           | Concrete bermed area (no valve)  |
| Bldg. 490  | <200           | No secondary containment   |
| Bldg. 492  | 100 (est)      | Concrete berm (no valve). However, will not contain if tank overturns.                       |
| Bldg. 523  | 600 (est)      | Concrete berm (no valve).  |
| Bldg. 528  | 100            | Concrete berm (no valve)   |
| Bldg. 533  | 110 (est)      | Metal containment cell (with valve)  |
| Bldg. 554  | <40            | No secondary containment   |
| Bldg. 567  | >200           | Metal containment cell in base of generator (with valve)                                     |
| Bldg. 575  | >100           | Metal secondary containment cell (also tanks located inside flight line containment curbing) |
|  | <5             | No secondary containment (but inside flight line containment curbing)                        |
| Bldg. 609  | >40            | Metal secondary containment cell (with valve)  |
| Bldg 616   | >200           | Bermed floor of building   |
| Tank 617/618 (Fuel Farm)   | >5,000         | Concrete wall (with valve)   |
| Tank 701 (Fuel Farm)   | 798,239        | Concrete wall (with valve)   |
| Tank 702 (Fuel Farm)   | 794,648        | Concrete wall (with valve)   |
| Tank 801/802/803 (Jet Fueling)   | 60,748         | Concrete pit with sump and sump pump   |
| <b>TOTAL SECONDARY CONTAINMENT CAPACITY (gal)</b>                                    |                | 1,688,915  |

| TABLE 6.3: NON-REGULATED SPCC PROGRAM FACILITY SUMMARY |                  |                               |                           |                       |
|--|------------------|-------------------------------|---------------------------|-----------------------|
| BUILDING NUMBER  | VOLUME (Gallons) | CONTENTS                      | STORAGE METHOD            | SECONDARY CONTAINMENT |
| SMALL QUANTITY STORAGE AREAS                           |                  |                               |                           |                       |
| 239  | <20              | Sodium Hypochlorite           | Room                      | Not Applicable        |
| 340  | <20              | Oils, Paints, Treatment Water | Pallets in warehouse      | None                  |
| 374  | <20              | Sodium Hypochlorite           | Room                      | Not Applicable        |
| 419  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 460  | <20              | Oils, Fuel                    | Flammable storage cabinet | Base of Cabinet       |
| 507  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 510  | <20              | Oils, Paints, Solvents        | Flammable storage cabinet | Base of Cabinet       |
| 511  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 513  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 515  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 516  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 565  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |
| 570  | <20              | Oils, Paints                  | Flammable storage cabinet | Base of Cabinet       |

Note: Oils include motor oils, transmission fluid, hydraulic fluid, spray lubricants

TABLE 6.4: SUMMARY OF RECOMMENDATIONS FOR 1999 SPCC PROGRAM

| BUILDING NUMBER | BUILDING ACTIVITY      | RECOMMENDATION  |
|-----------------|------------------------|---|
| Fuel Farm       | Fueling                | Label inactive pipelines and valve boxes. Protect fuel transfer hoses from direct sunlight. Install fire extinguishers in unloading rack area. Train employees in SPCC. Provide inspection reports to PWD-ED. Install shut-off valves near every drop and exit of the underground pipeline. Install warning signs or systems to prevent early departure of tanker trucks. |
| Direct Fuel     | Fueling                | Install spill containment around fueling pad. Perform and document inspections and submit reports. Do not fuel in unbermed areas. Conduct SPCC training. Stock fuel trucks with absorbent. Provide spill kits. Ensure drain valve is secured.   |
| 112             | Aircraft Maintenance   | Monitor housekeeping practices. Conduct SPCC training.  |
| 116             | Generator              | Provide absorbent. Ensure drain valve is secured.   |
| 120             | Sewage Treatment Plant | Provide absorbent.  |
| 125             | Generator              | Provide absorbent.  |
| 127             | Hangar                 | Monitor oil staining of apron. Provide absorbent. Conduct SPCC training.  |
| 130             | Generator              | Provide absorbent. Ensure drain valve is secured.   |
| 137             | Fire Station           | Modify battery storage. Ensure drain valve is secured.  |
| 157             | Vehicle Maintenance    | Improve product labeling. Upgrade flammable locker with secondary containment. Confirm storm drains are adequately blocked (or provide protection from spills). Provide containment for outdoor parts. Conduct SPCC training.   |
| 165             | Truck Maintenance      | Install or upgrade secondary containment. Provide absorbent. Conduct SPCC training. Replace tanks with double walled tanks.   |
| BOS Yard        | Storage                | Ensure drainage of transformers secondary containment.  |
| 200             | NEX Gas Station        | Inspect tanks and supply results to PWD-ED. Provide absorbent.  |
| 201             | NEX Exchange           | Provide absorbent. Decommission the diesel generator.   |
| 210             | NEX Commissary         | Provide absorbent.  |

TABLE 6.4: SUMMARY OF RECOMMENDATIONS FOR 1999 SPCC PROGRAM

|          |                       |   |
|----------|-----------------------|---|
| 218      | Hangar                | Monitor housekeeping. Conduct SPCC training.  |
| 220      | Smoke Oil Tank        | Perform and document inspections and submit reports to PWD-ED. Provide absorbent at tank.                                 |
| 222      | GSE                   | Provide absorbent. Upgrade product labeling practices. Obtain corrosive lockers for acid storage.                         |
| 225      | Hangar                | Monitor housekeeping. Conduct SPCC training.  |
| 230      | Auxiliary Beacon      | Provide AST secondary containment. Install secondary containment for Day Tank, estimated 25 gallon storage.               |
| 285      | Generator             | Provide absorbent. Ensure the drain valve is secured.   |
| 286      | Air Start             | Provide labels and warning signs. Provide absorbent. Re-pipe effluent into nearby oil/water separator.                    |
| 315      | Generator             | Provide absorbent for AST. Ensure drain valve is secured.   |
| 333      | Water Treatment Plant | Provide respiratory protection response equipment. Provide absorbent for AST. Conduct SPCC training.                      |
| 340, 350 | Water Treatment Plant | Provide respiratory protection response equipment. Provide secondary containment for tank and drums.                      |
| 351      | Mixing                | Evaluate for SPCC requirement after construction upgrade.   |
| 362      | Hobby Shop            | Provide secondary containment for all inventory. Lock outdoor storage. Upgrade labeling practices. Conduct SPCC training. |
| 378      | Car Wash              | Protect storm drain north of wash rack. Upgrade labeling practices.   |
| 400      | Box Service Station   | Perform and document inspections and submit reports to PWD-ED. Provide absorbent. Ensure drain valve is secured.          |
| 433      | Generator             | Provide absorbent.  |
| 436      | Generator             | Provide secondary containment for drums. Reduce drum inventory. Provide absorbent in boiler room.                         |
| 446      | Generator             | Provide absorbent. Post warning signs or systems to prevent early departure of tanker trucks.                             |
| 459      | Generator             | Provide absorbent. Provide warning signage.   |
| 490      | Generator             | Provide secondary containment. Provide absorbent. Replace rubber hose with rigid lines.                                   |
| 492      | Generator             | Secure fuel tank stand. Provide absorbent. Replace tank with a double walled tank.  |
| 502      | Hangar                | Monitor housekeeping. Conduct SPCC training.  |
| 503      | Hangar                | Monitor housekeeping. Conduct SPCC training.  |

TABLE 6.4: SUMMARY OF RECOMMENDATIONS FOR 1999 SPCC PROGRAM

|     |                      |   |
|-----|----------------------|---|
| 505 | Fueling/<br>Hangar   | Loaded fuel trucks must park inside containment curb. Fueling and maintenance only performed on west side of hangar inside containment curbing. Repair damaged curbing.   |
| 512 | HAZMAT               | Berm in warehouse for Aircraft soap.  |
| 519 | T-Line               | Provide a spill kit at Hazmat Lockers. Construct catch basin at west end of drainage swale.   |
| 523 | Medical<br>Clinic    | Provide absorbent for AST. Insufficient containment for storage volume, some corrosion on tank supports, recommend replacement with double walled tank.   |
| 524 | Special<br>Warfare   | Provide absorbent for generator. Construct a perimeter curb at the south end of the building to contain any significant spill from migrating onto the street, or restrict aircraft staging and refueling in all areas not protected by containment curbing. |
| 526 | Hangar               | Monitor housekeeping practices. Conduct SPCC training. Construct a perimeter curb at the south end of hangar (along north side of 8th street) or fueling and aircraft staging restrictions are needed.  |
| 530 | Hazwaste<br>Compound | Equip containment drainage valves with locks.   |
| 533 | Deluge<br>Pump House | Provide absorbent for AST. Ensure drain valve is secured.   |
| 554 | Generator            | Construct berm across doorway for containment. Provide absorbent for AST.   |
| 567 | Generator            | Provide absorbent for AST.  |
| 575 | Air Start            | Re-pipe effluent into nearby oil/water separator.   |
| 609 | Generator            | Provide absorbent for AST.  |
| 616 | Generator            | Provide absorbent for AST.  |

## **SITE-SPECIFIC CONTINGENCY PLAN**

This section presents the site-specific facility contingency plan for facilities included in the SPCC Program. This plan is a generic quick-reference series of procedures that facility personnel should implement in the event of a spill of oil or hazardous substances. Facility personnel should be familiar with these procedures, and this plan, along with Table 6.5 and the site-specific map should be posted in plain site at each respective facility. This site-specific contingency plan addresses only immediate actions. More detailed emergency response procedures are outlined in Annex 1.

## SITE-SPECIFIC FACILITY CONTINGENCY PLAN

The Facility Environmental Coordinator for each building will assume command of response operations until relieved by the **NOSCDR**. This person must at a minimum, be OSHA 40-hour trained (OSHA 1910.120). Their primary responsibility is to assess the situation and take the following action:

**ACTIVATE AND DIRECT** facility response personnel to implement emergency response operations to protect life and property. The order of operations will depend on existing conditions and may be concurrent.

**RESCUE** any injured individuals without risking personal safety.

**SECURE** the spill area from unauthorized personnel.

**STOP SOURCE AND PREVENT** spill from entering floor or storm drains. Use on-site spill containment equipment and materials stored in supply room. **AVOID** contact with liquids and fumes. **IF** spill occurs in bermed areas, assure drain valve is closed and locked.

**ELIMINATE** all sources of ignition - smoking, combustible engine, open flame if flammable vapors are suspected or present.

**IF FIRE DEVELOPS, USE** proper equipment at hand to extinguish the fire, pending arrival of the Fire Department. **FIRE ALARMS** and **FIRE EXTINGUISHERS** are noted on the building floor plans (see Respective Facility Map by building number).

**QUICKLY DETERMINE** the need to evacuate all or part of the facility and implement the **EMERGENCY EVACUATION PROCEDURES** as required.

**WARNING:** If necessary, **EVACUATE** personnel through the nearest safe exit (**see Facility Map under building number**). The site map depicts the location of emergency exits and emergency response equipment/resources.

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Number of Full-Time Persons Working at this Site: **See TABLE 6.7**

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Should an evacuation be necessary, personnel shall meet at the designated assembly area (see Facility map). Roll call shall be conducted by the Facility Environmental Coordinator (Primary or Alternate). In case of toxic or flammable spills, the Facility Environmental Coordinator shall notify personnel in the neighboring buildings:

**See TABLE 6.7**

| TABLE 6.7: SITE-SPECIFIC CONTINGENCY PLAN INFORMATION |                                    |                                   |
|---|------------------------------------|-----------------------------------|
| BUILDING NO.  | NUMBER OF FULL-TIME WORKER AT SITE | ADJACENT BUILDINGS                |
| Fuel Farm   | 2                                  | 504, 507, 609, 619, 616           |
| Aircraft Fueling                                      | 5                                  | 502, 503, 514, 515, 516           |
| 112   | 0 - 100                            | 117, 211                          |
| 116   | 0                                  | 110, 115, 122, 213, 214, 281      |
| 120   | 0 - 2                              | 100                               |
| 125   | 0                                  | 115, 117, 122, 129, 192, 286      |
| 127   | 0 - 150                            | 128, 129, 192, 286                |
| 128   | 10                                 | 127                               |
| 130   | 1 - 3                              | 131 132, 134, 135, 137, 139, 142  |
| 137   | 12 (with 3 shifts of 12 each)      | 130, 135, 142                     |
| 157   | 6 - 10                             | 145, 160, 163, 164, 193, 197      |
| 165   | 6 - 16                             | 145, 157, 163, 164, 193, 194      |
| BOS Storage Yard                                      | 0                                  | 157, 160, 165, 175, 195, 400, 446 |
| 200   | 2                                  | 205, 206, 227, 231, 238, 239, 282 |
| 201   | 5 - 10                             | 202, 203, 210                     |
| 204   | 1                                  | 208, 229                          |
| 210   | 5 - 10                             | 201, 202, 203                     |
| 218   | 0 - 150                            | 219, 222, 223, 224, 225           |
| 220   | 0                                  | 218, 222, 223, 224, 225, 226      |
| 222   | 5                                  | 218, 219, 221, 220, 223           |
| 225   | 0 - 150                            | 204, 208, 224, 226, 229           |
| 230   | 0                                  | 212, 213, 219, 283, 285           |
| 285   | 0                                  | 214, 215                          |
| 286   | 0 - 1                              | 125, 127, 128, 129, 192           |
| 315   | 0                                  | 311, 314, 315, 316, 361, 375, 376 |
| 333   | 0                                  | 301, 334, 365                     |
| 350   | 2                                  | 334, 340, 351, 365, 377           |

| TABLE 6.7: SITE-SPECIFIC CONTINGENCY PLAN INFORMATION |                                     |  |
|---|-------------------------------------|--|
| BUILDING NO.  | NUMBER OF FULL-TIME WORKER AT SITE  | ADJACENT BUILDINGS                     |
| 351   | 0                                   | 334, 340, 350, 365, 377                |
| 362   | 10 - 15                             | 316, 318, 330, 361, 374, 378, 364      |
| 378   | 0                                   | 318, 330, 362, 364                     |
| 400   | 0                                   | 440, 446                               |
| 433   | 0                                   | 427, 436                               |
| 436   | 1 - 10                              | 433, 440                               |
| 446   | 0                                   | 195, 400                               |
| 459   | 0                                   | 484                                    |
| 484   | 0 - 1                               | 426, 459                               |
| 490   | 0                                   | 490                                    |
| 492   | 0                                   | 493, 494                               |
| 502   | 0 - 150                             | 560                                    |
| 503   | 0 - 150                             | 502, 512, 513, 514, 515                |
| 505   | 4                                   | 507, 508, 509, 564                     |
| 508   | 8                                   | 504, 505, 507, 509, 510, 564, 570      |
| 509   | 0                                   | 505, 508, 510, 564, 570                |
| 512   | 8                                   | 504, 510, 511, 513, 530, 538           |
| 514   | 11 (Dyncorp: 10; TACTS: 1)          | 503, 513, 515, 516, 528                |
| 517   | 7                                   | 502, 516, 518, 519, 529                |
| 519   | 6                                   | 517, 518, 523, 524                     |
| 523   | 19                                  | 519, 534, 565, 566, 567                |
| 524   | 3 - 100 (TACTS: 3; Hangar: 0 - 100) | 519, 531, 532, 541                     |
| 528   | 0 - 20                              | 513, 514, 516, 529, 530                |
| 530   | 0 - 3                               | 504, 510, 511, 512, 513, 514, 528, 570 |
| 533   | 0                                   | 534, 565                               |
| 554   | 0                                   | 546                                    |
| 567   | 18                                  | 523, 533, 534, 565                     |
| 575   | 0 - 1                               | 505, 509, 510, 511, 564                |
| 609   | 1 - 4                               | 616, 619                               |
| 616   | 0                                   | 609, 619                               |

## 6.1 FUEL FARM

### Facility Description

The Fuel Farm is located in the southeast corner of NAF El Centro, east of E Street between 7th and 8th Streets. This location is within the restricted area of the flight line perimeter fence. The Fuel Farm consists of a number of facilities:

four aboveground storage tanks (ASTs) for storage of jet fuel, fuel loading racks for loading tank trucks used to fuel aircraft, fuel unloading stations for tank trucks to unload fuel to the storage tanks, and numerous fuel transmission lines for transferring fuel from the Kinder and Morgan pipeline to the storage tanks, from the storage tanks to the truck fueling rack or other storage tanks, and from the storage tanks to the direct fueling area.

In addition, there are three buildings at the site: Buildings 609 (the fuel control building and emergency generator), 616 (an emergency generator), and 619 (a transformer pad). Buildings 609 and 616 are discussed separately, as Sites 56 and 57. The transformer does not contain PCB according to NAF personnel and, therefore, it is not addressed in this portion of the SPCC.

Most of the Fuel Farm is unpaved. Steel aboveground pipes ranging from 2 to 10 inches in diameter traverse a majority of the site. The fuel loading and unloading areas are concrete drives with recently constructed secondary containment systems. Fuel pipes that cross the taxi way areas are underground. All underground pipes have cathodic protection against corrosion. All aboveground pipes are painted.

Aircraft are fueled at the direct fueling pad on the airfield. The civilian contractor, Maytag Aircraft Corporation (Maytag), operates and maintains the Fuel Farm facilities.

## Storage

There are four ASTs in service at the Fuel Farm. The tanks and their storage capacities are as follows:

|                |   |
|----------------|---|
| Tank 701 (AST) | 798,239 gallons (95% Cap) for JP-5,         |
| Tank 702 (AST) | 794,675 gallons (95% Cap) for JP-5, and     |
| Tank 617 (AST) | 4,750 (95% Cap) gallons for fuel stripping, |
| Tank 618 (AST) | 4,750 (95% Cap) gallons for off-spec fuel,  |

The quantity of JP-5 fuel typically stored at the Fuel Farm is 90 percent to 95 percent of the total capacity of the main storage tanks. The storage tanks are typically filled daily to weekly depending on aircraft training demand. The weekly average amount of fuel issued in 1998 was 278,636.

The ASTs were constructed in 1994 and 1998. All are single-wall steel tanks that are compatible with the materials stored. All storage tanks are equipped with tank vents to the atmosphere, manways, and a variety of gauges, pumps, and other accessories. These exterior features are typically protected by small shelters at the tank or in valve pits. The ASTs are all located within a concrete containment cell. Bollards are placed around the containment cells for general protection from truck traffic.

Liquid levels in the tanks are measured using both a sounding and gaging system. During transfer operations, the fuel level is gaged every two hours. In addition, the storage tanks are fitted with level sensors, and the liquid level can be monitored remotely on an office computer. Liquid levels are monitored continuously during fuel transfer. Audible high-liquid level alarms are on the tanks to alert Maytag personnel during tank filling operations. However, the alarm system does not automatically stop the flow of fuel to the tank. Instead, the flow of fuel must be shut off manually using the appropriate valves. High-level alarms are tested at least monthly.

The underground pipelines are cathodically protected. The impressed current system employs a direct current from an external source that is passed through the system using non-sacrificial anodes that are buried deep at various locations on the Fuel Farm. This system is checked and maintained regularly. All aboveground storage tanks are painted for corrosion protection.

In addition to regular visual inspections, the tightness of tanks and lines are tested. ASTs are tested annually. All of the existing tanks and lines tested tight in 1998.

USTs removed from the Fuel Farm during 1994/1998 included Tanks 601, 602, 603, 604, 605, and 617, and 618. However, tank numbers "617" and "618" were re-used for the replacement AST tank numbers.

Hazardous substances are not used or stored in large quantities at the Fuel Farm.

### **Transfer**

Fuel is delivered to the Fuel Farm via the Kinder and Morgan pipeline. JP-5 fuel is pumped through the underground pipeline to NAF El Centro at a maximum flow rate of approximately 200 gallons per minute (gpm). The Kinder and Morgan pipeline enters NAF El Centro property on the southeast corner of the Activity (Figure 3). The pipeline continues underground to the filter/separator. Filter waste is flushed to a 500-gallon UST at the filter/separator during cleaning. The waste is immediately removed from the holding tank after the cleaning process is complete. This maintenance is performed by Kinder and Morgan personnel.

Postfiltration fuel is transmitted to the ASTs through an aboveground 8-inch steel pipe. Maytag is responsible for all fuel transfer operations once the fuel leaves the filter/separator.

Tank trucks may be used up to twice a year to supply additional JP-5 during periods of heavy aircraft training. These trucks off-load fuel at the unloading rack, which goes

directly to the storage tanks. Standard operating procedures (SOPs) for storage tank fueling from commercial tank trucks and for fueling Maytag tank trucks from storage tanks are posted in the Fuel Farm office and are included in Figure 5.

Three loading stations and three filters are located at the loading rack for fueling the tank trucks. Two additional loading stations exist; however, they are out of service. Although early-departure warning systems are not in place at the fuel loading area, as of 1995, the truck driver is required to hold an activation switch (deadman switch) and visually monitor the fuel transfer operations. Without continuous activation of the switch, the fuel pumps will not operate. In addition, the pumps will automatically stop once the switch is released. Under this operating procedure, early departure is unlikely.

The ASTs are piped directly to the fueling rack and to direct fueling. Most of the piping used is steel aboveground pipe. Consistent with current operations, all aboveground pipe is fitted with roller supports, piping anchors, slide supports, guide supports, and expansion joints. Maximum spacing between the guide supports and anchors varies from 20 feet (4-inch pipe) to 25 feet (6- and 8-inch pipe).

Aboveground pipelines not in service throughout the Fuel Farm are capped. The aboveground piping is painted to protect against corrosion and marked as to flow direction. It is also regularly inspected and maintained. At points where aboveground piping enters the ground, the piping is wrapped for several inches below the air/soil interface to protect against corrosion.

All fuel transfers to tank trucks are conducted on concrete pavement within secondary containment systems. The fuel loading racks, including the vertical filter/separators and other accessories, are on a concrete island, slightly elevated off the ground. The systems are protected by bollards that surround each of the three fueling islands.

## **Containment**

Secondary containment systems have been constructed within the Fuel Farm to control spills. In the vicinity of the fuel loading racks, the concrete pavement has been retrofitted with perimeter containment curbing. The perimeter curbing is completed with two rollover berms across the concrete driveways. A collection system exists to collect any free liquids, which consists of a catchment basin in each fueling lane connected by underground discharge lines draining west to a common pipe. These collection pipes are fitted with a series of cleanouts and a main valve (closed) for fluids containment. Ultimate discharge from this collection system is the earthen storm water ditch west of the Fuel Farm, but the collected liquid must be inspected prior to release. This collection system provides secondary containment, as well as stormwater control. The containment area will contain 8,000 gallons, the maximum volume of one tank truck.

These same features have also been installed in the fuel unloading area. Perimeter curbing has been constructed along the length of the unloading station. A rollover berm exists at the up-slope end of the drive and a trench drain is installed at the down-slope side. The containment trench flows to a drainpipe that is fitted with several cleanouts and a closed valve. Both stormwater and any potential spills are contained within these fueling area containment systems. Any collected fluids are inspected (when fluids are present) by Environmental Division personnel to determine storm drain discharge applicability. This containment area is also adequate to contain 8,000-gallons, the maximum volume of one tank truck.

The ASTs are designed with a concrete containment cell. Each of the two tanks has a separate secondary containment cell. The cells are fitted with locked valves and the floors are sloped away from the tanks. Both cells can hold approximately 120 percent of the tank capacity.

## **Drainage**

The topography of the ground surface controls the flow of surface drainage throughout much of the Fuel Farm. In general, sheet flow from the Fuel Farm migrates west to the earthen drainage ditch along the west boundary of the Fuel Farm. Because most of the Fuel Farm is unpaved, the soils will retain some water before sheet flow to the drainage ditch occurs. In the immediate vicinity of the loading rack, the unloading rack, and the ASTs, surface drainage is controlled by the secondary containment systems. Runoff is blocked from exiting the containment cells by the conveyance systems with closed valves. Only after inspection or analysis are the collected fluids released to storm water conveyances or pumped for disposal (as required). However, because of the limited precipitation at NAF El Centro, collected liquids may evaporate prior to removal.

The earthen ditch on the western boundary transmits water west, then north to the airfield, then east to the Rice Drain. This conveyance eventually discharges to the New River northwest of the Activity (Figure 3).

## **Spill Prediction**

The potential for spills exists throughout the Fuel Farm. The spill potential at each of the primary facilities is described below.

**Loading Rack Area:** Potential spill sources in the loading rack area are overfilling of a tanker truck, a hose rupture during fuel transfer to the trucks, and truck vessel failure. The largest spill that could occur in one of these events is the release of 8,000 gallons (one tank compartment). Spills in the loading area would flow to the concrete pavement, then to the secondary containment drains. The spill would be completely contained by the closed valve system and the perimeter curbing and rollover berms. It is unlikely that a spill from one tank truck in the loading rack would reach or impact the storm drainage ditches on the west side of the Fuel Farm.

**Unloading Station Area:** The potential spill source at the unloading station area is hose or piping rupture during fuel transfer from an 8,000-gallon truck. Because these tanks typically comprise a single compartment, the maximum spill volume would be 8,000 gallons. Spills in this area would flow to the concrete drive areas and flow down-slope to the north. Perimeter curbing would contain the spill volume to the concrete drive. The spilled material would be intercepted and collected in the trench drain at the north end of the unloading rack. The existing rollover berm would prevent fuel from migrating beyond the trench drain. The drain is connected to piping with a closed valve and several cleanouts, identical to those around the loading rack. This spill containment system has adequate containment for one tank truck (8,000 gallons) and prevents spills from reaching the drainage ditch on the west side of the Fuel Farm.

**Aboveground Piping:** Rupture of the aboveground piping during fuel transfer from the Kinder and Morgan pipeline or transfers to the direct fueling area could result in a discharge of 1,000 to 2,000 gallons of JP-5 fuel to the surrounding soil. The maximum pumping rate at the facility is approximately 200 gpm, and because the shutoff valves are manually operated, the extent of the spill is determined by the reaction time of the operator (estimated at a maximum of 5 to 10 minutes). Spills to the ground surface would flow predominantly west to the drainage ditch on the west side of the Fuel Farm. A spill of this magnitude may reach the earthen drainage ditch, but it is unlikely that this volume would be capable of reaching the drains or canals off-Base.

**Underground Piping:** Rupture of the underground piping (limited to piping under taxi ways) during fuel transfer would result in a more extensive spill, as the leak could go undetected for a longer time. Leaks from these pipes would be transmitted directly to the subsurface soils and groundwater. Routine inventory control checks during fuel loading and unloading should assist in early detection of leaks in below-grade piping. Annual integrity testing required in this SPCC will also lead to early leak detection.

**Aboveground Storage Tanks:** Two ASTs are located at the Fuel Farm. AST 701 total capacity is 840,000. AST 702 total capacity is 836,000. Potential spills associated with the ASTs consist of valve failure (mechanical or human error), line rupture, or structural

failure of the tank. The maximum spill volume would be approximately 798,239 gallons (95 percent of tank 701 volume, which is reportedly the maximum operating volume). The tanks are in concrete secondary containment cells that are adequate to hold 120 percent of the tank contents. Therefore, a spill would likely be contained by secondary containment. Should the containment cell also fail at the time of a release, fuel would immediately enter the earthen drainage ditch and, with high probability, migrate off Base. In addition, the maximum volume is so great that fuel would likely flow to storm drains west of the Fuel Farm and flow to the New River located west of the Activity. With planned secondary containment in place, this situation, although possible, is unlikely.

Another spill potential common to ASTs is overfilling of the storage tanks during fuel loading or unloading operations. Even though the high liquid level alarms on the tanks enable early detection and minimize spills, high liquid level pump shutoff devices would further reduce the probability of a spill from overfilling.

### **Security**

NAF El Centro is secured with a perimeter fence. The only access to the Activity is through the main gate, which is manned 24 hours a day by armed guards. Only authorized personnel are allowed to enter the Activity. In addition, the Fuel Farm is secured by a second perimeter fence open only on the northwest with direct access to the airfield. Two other gates provide access to the Fuel Farm.

### **Administration**

The Fuel Farm is operated and maintained by Maytag. Maytag personnel perform daily, weekly, monthly and annual inspections in accordance with their Preventative Maintenance Inspections (PMI) program. A maintenance activity chart posted in the Fuel Farm office summarizes the scheduled maintenance. Maytag maintains the maintenance and inspection records, while the fuel delivery and transfer records are maintained by an accounting contractor.

### **Recommended Corrective Action**

1. Protect fuel transfer hoses from direct sun exposure.
2. Train Fuel Farm employees in SPCC Procedures (Section 5).
3. Install shut-off valves near underground drop and rise sides of pipeline.
4. Provide results of Quarterly and Annual Inspections to Public Works Department - Environmental Division.
5. Install warning signs or systems to ensure early departure of tanker trucks does not occur.

## **6.2 AIRCRAFT FUELING AREAS**

### **Facility Description**

The most commonly used fueling areas are the concrete parking aprons (flight apron) located along Taxiways E and D (south and west sides of the airfield) between the taxiways and the hangars. Fueling operations are also performed occasionally at the combat aircraft loading area (CALA) at the northeast end of the closed Runway 3.

During 1998, aircraft fueling operations expanded to include a direct aircraft fueling area immediately west of the intersection of Taxiways A/E, B/E and E. The direct fueling area consist of three ASTs, four fueling lanes with separate pantographs (fuel dispensing units), concrete and asphalt drives, and associated flood lights, fuel and electrical shutoffs, and fire protection. The direct fueling area ASTs receives fuel daily via an aboveground pipeline from the Fuel Farm.

### **Storage**

The two ASTs (Tanks 801 and 802) store a total of 60,000 gallons of JP-5. The two AST steel tanks sit horizontally aligned in a single concrete containment pit. A third AST (Tank 803) with a capacity of 2,900 gallons, also inside the pit, serves as a stripping tank for the fueling operations. The tanks rest on steel saddles approximately one-foot off the floor of the containment cell.

The ASTs are fitted with access stairs and manways, vents, a high level alarm and shut-off, and a level transmitter. The tanks have interior and exterior coatings to prevent corrosion. A perimeter asphalt access drive surround the tanks. Rollover berms protect the underground piping in the drive areas, as well as to supplement secondary containment.

Hazardous substances other than fuels are not used or stored in large quantities at the aircraft fueling areas.

### **Transfer**

Prior to 1998, the only fuel transfer mechanism was tank trucks. However, the direct fueling area supports the aircraft fueling operations. Although tank truck transfer will be reduced, it will not be replaced by direct fueling. The direct-fuel ASTs receives fuel daily from a 10-inch aboveground steel pipeline from the Fuel Farm. The aboveground pipe is properly marked, protected from corrosion, and fitted with expansion joints, rollers, and pipe stands in accordance with applicable regulations. Transfers from the ASTs to the fueling lanes are accomplished by an aboveground 10-inch pipe (underground below the fueling pads) that connects to the pantographs. All piping is steel. The quantity of JP-5 proposed for distribution to aircraft is unknown at the time of this report.

### **Containment**

The concrete parking apron has a 6-inch concrete curb and a series of valved catchment basins. The valves are maintained closed to contain any spills (or storm water) occurring on the parking apron. Liquids collected in the catchment basins are inspected or analyzed prior to release. In some cases, these catchment basins along the flight apron drain to the storm sewer system when a valve is opened. Most are blind sumps. The perimeter containment curbing, is not continuous along the entire flight line. Curbing was not constructed between Buildings 524 (Hangar 6) and 519 (T-line operations) for runway and flight line access. In addition, the existing curbing is breached to the east of Building 505. All fueling operations occur on concrete or asphalt to minimize the impact of spills to the surface soils.

The three ASTs are placed in a concrete secondary containment cell (partially underground). This cell is designed to contain at least 110 percent of the contents of one 30,000-gallon AST. All valves and filters are located within the containment. The tank pit is also designed with a gentle slope to the west and a corner sump for fluids

collection. The sump contains a float-activated discharge pump with discharge to the ground surface.

The concrete fueling pad (four lanes) where direct fuel transfer occurs has no secondary containment. Spills would flow to the concrete surface, then to the soil surrounding the pad. Two stormwater swales are located in the immediate vicinity of this fueling pad conveying water to a storm drain east of the site.

### **Spill Prediction**

Within the direct fueling area, leaks associated with the tank system (filters, tanks, valves, etc.) would be contained within the concrete secondary containment cell. The maximum spill potential from one tank is 30,000 gallons, which the containment cell would adequately hold. The cell slopes to the west to a corner sump. The sump pump is float-activated and allows a manual discharge to the ground surface. In the event of a spill in the tank pit, the fuel would be pumped out into a tanker truck and the remaining small amount of fuel in the sump would be absorbed and disposed of properly.

A spill on the fueling pad would result from a line or attachment leak. It is assumed that a spill in this area could total 100 gallons (estimated tank leak) before it is stopped. Spilled fuel would flow to the asphalt pad, then drain north or south to curbing and then to the catch basins. The spilled fuel would likely enter the drainage swales and flow to the storm drain approximately 300 feet north of the pad.

### **Drainage**

Surface runoff from the concrete apron along the taxiways will flow south or west and be contained by the concrete curbing and catchment basins. The collected fluids are inspected prior to release to the storm drains. Because of the lack of precipitation, fluids (almost exclusively rainwater or washwater) collected in the catchment basins are often allowed to stand and evaporate.

Surface runoff collected in the secondary containment tank pit will flow to the sump and be discharged to the ground surface by a float-activated sump pump. Sheet flow in the vicinity of the fueling pad drains to two drainage swales constructed in conjunction with the direct fueling area. Both swales transmit runoff north to the storm drain at the intersection of Taxiways B/E and closed Runway 12 R.

The direct fueling area has no provisions to prevent stormwater runoff from being contaminated by fuel during fueling operations, or for containing spills or potentially impacted surface runoff.

### **Security**

NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity. In addition, all aircraft fueling operations are conducted within the airfield, which is further secured by a second perimeter fence. Because the Fuel Farm is also located within this secondary fence, tank trucks have direct access to the aircraft. Further, security maintains regular patrols of the Activity and flight line operations.

### **Administration**

All aircraft fueling operations are performed by Maytag. In addition, Maytag is responsible for regular visual inspections of the tanks and lines, as well as leak detection testing. Maytag implements its own preventative maintenance program, and maintains the records.

## **Recommended Corrective Actions**

1. Perform and document inspections according to standard operating procedures and checklists provided in Annex 2. Provide the results of these evaluations to Public Works Department-Environmental Division.
2. Do not allow fueling operations or tank truck (or aircraft) staging to occur in areas where the containment curbing is breached or is non-existent (in the vicinity of Hangar 6, east of Hangar 9), and in the Combat Aircraft Loading Area (CALA).
3. Train Fuel Farm employees in SPCC Procedures (Section 5).
4. Provide absorbent materials on all fueling trucks to allow immediate mitigation of minor spills.
5. Ensure the drain valve is secured.

## **6.3 MAINTENANCE HANGAR 3, BUILDING 112**

### **Facility Description**

Maintenance Hangar 3 is located at the end of 3rd Street, west of the center of Taxiway E. Building 112 consists of an aircraft maintenance hangar and an associated hazardous materials accumulation area. The building is constructed of a wood frame and wood exterior. The hangar has a concrete floor and concrete pavement surrounds the building. Aircraft staging and repair are conducted within the hangar and on the apron area surrounding the hangar. Equipment housed within the hangar includes aircraft ground support and maintenance equipment.

Two hazardous waste lockers (Hazwaste locker) are associated with this building. They are located near the northwest corner of the building.

### **Storage**

Small quantities of lubricating oils, hydraulic fluid, and paints are commonly used and stored inside the hangar. These products are stored in two flammable material storage lockers (flammable lockers) inside the hangar. Typically, the total quantity of these products stored on-site is less than 10 gallons.

However, maintenance activities typically generate large quantities of waste liquids such as used oil, hydraulic fluid, and aviation fuel (JP-5). These wastes are collected in drip pans and 5-gallon buckets, or by absorbent materials during maintenance activities. Collected waste is consolidated in 35- and 55-gallon drums stored in two outdoor Hazwaste lockers. The Hazwaste lockers are metal, self-contained, walk-in storage units that lock. They are fitted with fire suppression, interior lighting, and an exterior eye wash and fire extinguishers. The lockers are also well marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker. In addition to waste, a spill kit is contained in each

Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle. A site-specific inventory of materials is presented in Annex 1.

### **Transfer**

Waste materials are generated inside the hangar and are typically transferred to the Hazwaste lockers on a daily basis. Accumulated hazardous waste is stored inside the Hazwaste locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesdays), or they can be contacted on an as-needed basis. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste are generated weekly.

New chemical products required for maintenance activities are procured from Hazmat daily. Only daily-use quantities are distributed. Chemical products are transported by vehicle to the hangar.

### **Containment**

The flammable lockers have a secondary containment cell in the bottom of the locker. This cell can contain spills from small-quantity containers stored inside the flammable locker. The Hazwaste lockers are constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. These containment cells are large enough to contain the entire contents of at least one of the containers stored in the Hazwaste lockers.

Spill kits are also stored inside the building near the flammable locker and inside one compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate small-scale spills.

## **Drainage**

The concrete flight apron in the vicinity of Building 112 slopes to the west toward the building. Runoff in the vicinity of the hangar would flow to the southwest and be contained by the concrete curbing and valved catchment basin system that surrounds the flight apron. Any liquid collected in the catchment basins is visually inspected before it is released to the storm drain system.

The floor of the hangar is flat. Small spills to the floor would pool on the concrete floor. It is unlikely that spills of small quantities of hazardous materials used inside the building would migrate outside in the event of a spill.

## **Spill Prediction**

Indoor spills will usually amount to either small quantities of oils that would be contained in the flammable lockers or flow to the concrete floor of the hangar. It is unlikely that a spill inside the hangar would migrate outside.

Spills inside the Hazwaste lockers would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete and migrate toward the concrete containment curbing. However, the entire contents of the drum would be contained by the curb and catchment basins. Clean up could be accomplished using on-site materials.

There is a sanitary sewer manhole approximately 100 feet from the southern bay door; however, the spill potential to the sanitary sewer system is negligible, as described above.

## **Security**

Building 112 is located within the flight line fence and security regularly patrols the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Brown & Root Transient Line operations schedule the use of Building 112. This hangar is used by transient squadrons while training at the Activity. Hazmat is responsible for coordinating all product and waste distributed to and collected from the facility.

## **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this facility.
2. Conduct SPCC review procedures for all squadron Hazmat coordinators.

## **6.4 EMERGENCY GENERATOR, BUILDING 116**

### **Facility Description**

Building 116 is a single-story masonry block building located northwest of A Street and 3rd Street. A newly installed 120/240-volt generator is housed inside Building 116.

Diesel fuel that supplies the generator in the event of a power failure is stored outside of the building in a 110-gallon steel AST with secondary containment and check valve.

Building 116 is located immediately adjacent to an earthen drainage ditch that parallels A Street.

### **Storage**

Diesel fuel is stored in a cylindrical 110-gallon AST inside a metal secondary containment cell. Both are secured to a concrete pad. The fill port is the only access to the tank, and no level controls exist on the tank. The tank is painted for corrosion protection. The tank is marked with appropriate cautionary signs.

No hazardous substances other than fuel are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST as needed. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. An aboveground pipe connects the AST to the generator. The generators are checked and operated weekly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection the fuel tank is topped off (as needed), but there are no other formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

## **Containment**

This AST has secondary containment consisting of a square metal pan. The containment cell is fitted with a drain valve, and can contain the entire contents of the tank (110 gallons). The fill port also has secondary containment. Absorbent material is not provided at Building 116; however, limited quantities of absorbent material are typically maintained on the tank trucks.

## **Drainage**

The area outside the building is flat and unpaved. There is a slight slope to the east toward the earthen storm drainage ditch approximately 40 feet east of the building. No drainage control features exist.

## **Spill Prediction**

Minor spills may occur during filling of the 110-gallon diesel fuel AST. These spills would generally flow to the secondary containment, where they could be cleaned up or allowed to evaporate. The largest potential spill would result in the event of a release from the tank truck or hose. In this case, fuel would flow to the ground surface, and possibly to the stormwater ditch. It is anticipated that a worst-case spill would not migrate far from the site.

## **Security**

There is no additional security around this building. However, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. The emergency generators are kept locked, and the Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

## **Recommended Corrective Action**

1. Provide absorbent materials inside the building to accommodate small spills or leaks associated with the typical transfer operations.
2. Ensure the drain valve is secured.

## **6.5 SEWAGE TREATMENT PLANT - EMERGENCY GENERATOR BUILDING 120**

### **Facility Description**

Building 120 is within the sewage treatment plant complex in the northwestern corner of the Activity, immediately west of the Elder Canal. The building is a single-story masonry block structure that houses treatment plant operation controls. Backup power is supplied by a generator located inside the building. Diesel fuel to power the generator is stored in a new 100-gallon AST immediately north of Building 120. A pad-mounted transformer is also outside the building to the east. Inside, the building houses a control room, laboratory facilities, and a vacant chlorine gas storage room. Chemicals to support these operations are stored at this building.

### **Storage**

Building 120 stores large quantities of oil and small quantities of hazardous substances. Diesel fuel for the emergency generator is stored in a new 100-gallon AST. The AST is a square double-walled tank mounted on a concrete pad. The tank is new, painted for corrosion protection, and in good condition. The only access to the tank is a fill port on the top of the tank. The AST is covered and is fitted with a float level indicator. The tank is adequately marked with warning signs and is protected by bollards from vehicle traffic.

In addition to diesel fuel, small quantities of hazardous substances are stored in a chemical cabinet in the laboratory area (southern portion) of Building 120. A small flammable materials storage locker (flammable locker) for storage of miscellaneous lubricants is outside and adjacent to the building. Chemicals stored in the laboratory and in the flammable locker outside total less than five gallons. Chlorine gas is no longer used at the site.

## **Transfer**

Diesel fuel is added to the 100-gallon AST when needed. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. A 1-inch diameter aboveground pipe connects the AST to the generator. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection the fuel tank is topped off (as needed), but there are no other formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

Small quantities of hazardous substances related to the laboratory operations are carried into and from the building by hand by site personnel when needed.

## **Containment**

The AST at Building 120 is double-walled. This secondary containment can adequately hold the entire contents of the 100-gallon tank. The double-walled system also has a cover to prevent precipitation from entering the containment. Hazardous substances are stored in flammable lockers that have internal secondary containment. No absorbent material is stored on site.

## **Drainage**

The area surrounding Building 120 and the AST is paved with asphalt. The general site topography slopes to the west toward the oxidation pond located adjacent to the building.

## **Spill Prediction**

Minor leakage from the AST would be contained by the double-walled protection existing on the tank. The largest potential spill would be associated with the tank truck used to service the tank. A release from the truck would flow to the asphalt pavement

then migrate west to the oxidation pond. Spills of diesel fuel related to the tank would not affect Elder Canal, located east of Building 120.

Indoor spills will usually amount to small quantities of oils or lab chemicals, which may form localized puddles on the building floor or asphalt pavement. It is unlikely that any chemical spill would migrate beyond the immediate vicinity of the building.

### **Security**

Building 120 is in a remote area of the Activity. Exterior lighting existing on the building appears sufficient to provide adequate lighting in the event of an emergency. The wastewater treatment plant is also secured by a perimeter fence. The gate is locked when the facility is unmanned. Finally, NAF EI Centro is secured by a perimeter fence and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF EI Centro.

### **Administration**

The wastewater plant is maintained by a subcontractor. Brown & Root operates and maintains the emergency generators. Preventative maintenance inspections of the AST are conducted weekly and monthly by Brown & Root, and occasionally by NAF EI Centro personnel. Maytag provides the fueling services.

### **Recommended Corrective Action**

1. Provide absorbent material inside the building to allow immediate response to spills associated with the diesel tank and generator, and the small-quantity chemical storage cabinets.

## **6.6 AIRFIELD LIGHTING VAULT - EMERGENCY GENERATOR, BUILDING 125**

### **Facility Description**

The Airfield Lighting Vault (Building 125) is located southwest of Hangar No. 2. The building consists of a single-story structure of masonry block construction. A 110-kilowatt generator is housed inside Building 125 for backup power supply for airfield lighting. Transformers are also inside the building, separated from the generator by a wall. Diesel fuel is stored outdoors in a 110-gallon AST. The ground surface surrounding the building is unpaved.

### **Storage**

Diesel fuel is stored in a 110-gallon AST. The tank is cylindrical and located inside a secondary containment cell. The tank is secured to a concrete pad and covered. Bollards are located around the tank for protection from vehicle traffic. A fill port and vent line are located on top of the tank. The tank is painted for corrosion protection, and well-marked with cautionary signs.

The transformers inside the building are filled with dielectric fluid. According to the Environmental Division, the transformer oil has been tested and confirmed as non-PCB (polychlorinated biphenyls below federal and state regulatory levels).

### **Transfer**

Diesel fuel is added to the AST on an as-needed basis. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. An aboveground pipe connects the AST to the generator. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection the fuel tank is topped off (as needed), but there are no other formal procedures for inventory control. Typical fuel transfers are approximately twenty gallons.

## **Containment**

The AST is located inside a secondary containment cell. The cell is metal and is fitted with a drainage valve. The containment cell is adequate to contain the contents of the tank in the event of a leak. Absorbent material is not stored on-site; however, it can be provided to this building by Hazmat when needed. Fuel tankers are also equipped with absorbent material.

The transformers are on the concrete floor of the building and do not have secondary containment.

## **Drainage**

The area outside the building is flat and unpaved. There is a gentle slope away from the building on each side.

## **Spill Prediction**

Minor spills may occur during filling of the 110-gallon diesel fuel AST. These spills would generally flow to the secondary containment, where they could be cleaned up or allowed to evaporate. The largest potential leak would result in the event of a release from the tank truck or fill hose during tank servicing. In this case, fuel would flow to the ground surface and migrate west and north. It is anticipated that a worst-case spill would not migrate far from the site.

Leaks from the transformers would flow to the concrete floor and possibly migrate outside to the unpaved surface soils. It is anticipated that leaks would not migrate far from the site.

## **Security**

The building does not have perimeter fencing. However, the tank is surrounded on two sides by the building and on a third side by the flight line perimeter fence. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. The emergency generator buildings are kept locked and the Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted by Brown & Root and occasionally by NAF El Centro personnel. Maytag provides the fueling services.

## **Recommended Corrective Action**

1. Provide absorbent materials inside the building to allow for quick response to minor spills associated with fuel transfers or leaking transformers.

## **6.7 MAINTENANCE HANGAR 2, BUILDING 127**

### **Facility Description**

Maintenance Hangar 2 is east of A Street and west of the north end of Taxiway E. It is supported by the Strike Fighter Wing Pacific Maintenance Unit (Building 128). Building 127 consists of an aircraft maintenance hangar and an associated hazardous materials accumulation area. The building is constructed of a wood frame and wood exterior. The hangar has a concrete floor and concrete pavement surrounds the building. Aircraft staging and repair are conducted within the hangar and on the apron area surrounding the hangar. Equipment housed within the hangar includes aircraft ground support and maintenance equipment.

### **Storage**

Typically, small (daily-use) quantities of lubricating oils, hydraulic fluid, and paints are used and stored inside the building. These products are stored in a small (single compartment) metal flammable materials locker (flammable locker) inside the building. Total quantity of these products stored on-site is less than 20 gallons. Building 128 typically supports Hangar 2 with its daily supply of products.

Maintenance activities conducted at Hangar 2 typically generate large quantities of waste liquids such as used oil, hydraulic fluid, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and absorbent materials during maintenance activities and are consolidated in 35- and 55-gallon drums stored in one side of the outdoor Hazwaste locker. The Hazwaste locker is metal, self-contained, walk-in storage units (approximate 15 ft by 8 ft by 8 ft) that lock. They are fitted with fire suppression, interior lighting, and an exterior eyewash and fire extinguishers. The lockers are also well marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker, and the drum are adequately labeled and grounded.

In addition to waste, a spill kit is contained in each Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

### **Transfer**

Waste materials are generated inside the hangar and are transferred to the Hazwaste lockers each day. Hazardous waste accumulation is stored inside the locker for a maximum of 14 days. The Hazmat coordinators are encouraged to dispose of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesdays) and can be contacted when needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated weekly.

New chemical products required for maintenance activities are procured daily from the Hazmat Department or from associated operations in Building 128. Only daily-use quantities of these products are distributed. Chemical products are transported by vehicle to the hangar.

### **Containment**

The Hazwaste lockers have approximately 175 gallons of secondary containment (the floor of the locker). This containment is large enough to hold the entire contents of at least one of the containers stored in the Hazwaste lockers. Inside the maintenance bay, drip pans are used underneath aircraft to control leaks.

A spill kit is also kept inside the Hazwaste locker to mitigate small-scale spills that may occur around the locker or inside the hangar.

## **Drainage**

The concrete flight apron in the vicinity of Building 127 slopes west. Runoff in the vicinity of the hangar would flow west and would be contained by the concrete curbing, rollover berms, and valved catchment basin system that surround flight apron. Any liquid collected in the catchment basins is inspected before it is released to the storm drain system, or collected for disposal.

The floor of the hangar is flat. Small spills to the floor would pool on the concrete floor. In the event of a spill, it is unlikely that the small quantities of hazardous materials used inside the building would migrate outside the hangar.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of oils that would be contained in the flammable lockers, or flow to the concrete floor of the hangar. It is unlikely that a spill inside the hangar would migrate outside.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment berm/curbing. However, the entire contents of the drum would be contained by the curb and catchment basins. Clean-up could be accomplished using on-site materials.

## **Security**

Building 127 is located within the flight line fence, and Activity security maintains regular patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Strike Fighter Wing Pacific Maintenance Unit occupies Building 127. Brown & Root provides maintenance services as required by the tenant.

## **Recommended Corrective Action**

1. Place absorbent inside the building for ready access for addressing spills on the concrete apron that surrounds the building.
2. Train personnel in SPCC procedures (Section 5).

## **6.8 STRIKE FIGHTER WING PACIFIC MAINTENANCE UNIT, BUILDING 128**

### **Facility Description**

Building 128 is along A Street to the south of 3rd Street and west of the concrete aircraft parking apron and Hangar 2 (Building 127). The building is single-story and houses several maintenance bays. The flight line perimeter fence is located at the east end of the building. The building supplies hazardous materials to Hangar 2 as needed. The perimeter of the building is paved with asphalt.

### **Storage**

Building 128 supports Hangar 2 with its daily supply of products. Typically, small quantities of lubricating oils, hydraulic fluid, and paints are stored inside of Building 128 and supplied to Hangar 2 when needed. These materials are stored in small, individual canisters located inside two flammable material lockers (flammable lockers) inside the building. No maintenance activities are conducted at Building 128.

Liquid oxygen is stored outside on the southeast corner of Building 128. The liquid oxygen converter storage tank is situated on a concrete pad with a metal roof to protect the tank from extremely high temperatures.

The Hazardous Waste lockers are metal, self-contained, walk-in storage units (approximately 15 ft by 8 ft by 8 ft) that lock. They are fitted with fire suppression, interior lighting, and an exterior eye wash station and fire extinguishers. Lockers are also well marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker and adequately labeled and grounded. The wastewater is transferred off-site by the Hazmat personnel.

## **Transfer**

The Hazmat Department collects waste on a weekly basis (Wednesdays), for transport to the Hazardous Waste Compound (Building 530). New products are procured from Hazmat as needed.

## **Containment**

Inside the building, the flammable lockers are equipped with internal containment sufficient to hold the contents of a spill from within the lockers. Various 1- and 5 -gallon containers are kept inside the flammable lockers.

The Hazwaste lockers provide approximately 175 gallons of secondary containment located in floor of the locker. This containment is large enough to hold the entire contents of at least one of the containers stored in the respective lockers.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of oils or surfactants. There are no large quantities stored within the building. Spills may occur from the surfactant wash basin located at the east end of the building. This basin is provided with secondary containment. Overflow from the containment basin would be the largest expected spill. Wastewater would either be held in the containment basin or spilled onto the adjacent asphalted area.

## **Security**

A caution sign is posted near the materials storage area. The rear of the building is within the flight line fence. In addition, the entire Activity is fenced and access is controlled through the main gate. Only authorized personnel are allowed access to NAF EI Centro.

## **Administration**

Strike fighter operates and maintains the building. Hazmat provides waste pick-up as needed.

## **Recommended Corrective Action**

1. No action is required.

## **6.9 CONTROL TOWER - EMERGENCY GENERATOR, BUILDING 130**

### **Facility Description**

The Control Tower (Building 130) is located along A Street, north of 3rd Street and west of Hangar No. 1 (Building 137). The building consists of a masonry block tower, approximately 5-stories tall. A 33-kilowatt generator is housed on the ground floor of Building 130. Diesel fuel is stored outdoors in a 110-gallon AST. The tank is double-walled, rests on a concrete pad, and is protected from vehicle damage by bollards.

### **Storage**

There are no hazardous substances inside Building 130. However, diesel fuel is stored outdoors in a 110-gallon AST. The tank is double-walled, which serves as adequate secondary containment. The tank appears to be fairly new and in good condition. The tank is painted for corrosion protection and is marked with warning labels. The tank is also protected from vehicle traffic by bollards.

### **Transfer**

A 1-inch aboveground fuel line supplies the generator. The fuel storage tank is filled from a 1,500-gallon tanker truck. The tank is topped off as part of the weekly and monthly preventative maintenance inspection, as needed. Fuel transfers are typically on the order of twenty gallons when they occur.

### **Containment**

The AST has secondary containment in the form of a double-walled tank. Absorbent material is not located on the site, but may be provided to this building by the Hazmat Department, when necessary. Fuel tankers that supply the fuel are also equipped with absorbent material.

## **Drainage**

The asphalt pavement surrounding Building 130 slopes to the west toward A Street. A concrete stormwater drain exists to the south of the site that drains to the west.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of fuel from the generator. It is unlikely that a spill of this nature would migrate outside. Leaks from the diesel fuel tank will be contained by the double-walled tank. The largest spill would result from the 1,500-gallon tank truck during servicing. The spill would likely migrate to A Street and possibly enter the storm drain system.

## **Security**

The control tower is located inside a chain link fence. The AST is further protected by bollards. In addition, the entire Activity is fenced, and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. The Activity security patrols the area as part of their rounds. Adequate lighting is available at this location.

## **Administration**

Although Air Traffic Control operates the building, they have no responsibility for the tank and generator. Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted by both Brown & Root and NAF El Centro personnel. Maytag provides the fueling services.

## **Recommended Corrective Action**

1. Place absorbent materials inside the generator room at this location.
2. Ensure drain valve is secured.

## **6.10 HANGAR 1, BUILDING 137**

### **Facility Description**

Hangar 1, Building 137, is the Fire Station hangar and is in the northwest corner of the concrete aircraft parking apron near the intersection of Taxiways A and E. The building consists of a single-story, wood frame structure. The facility consists of a firefighting station that is manned 24 hours a day with personnel and equipment. Flammable materials are stored inside the building in flammable material storage lockers (flammable lockers). A 35-kilowatt emergency generator with a 250-gallon diesel AST is located outside on the southwest side of the hangar. The tank and generator are pad-mounted and are surrounded by bollards for protection from vehicles.

### **Storage**

Small quantities of hazardous substances are stored in one flammable locker. Products stored in the cabinets consist of primarily of paints, lubricating oils, and cleaners, as well as several non-flammable products used for maintenance purposes. All materials are well marked and stored in an orderly manner.

A locked, metal storage cabinet, labeled "ACID", is on the west side of the building. The fire department stores two automobile type batteries used for emergency generator startup. The cabinet was not accessible.

A 250-gallon aboveground storage tank that stores diesel is located on the southwest side of the building. The tank has secondary containment and rest on a concrete pad. The AST supplies fuel to the adjacent emergency generator. The tank is painted, in good condition, and is adequately marked with warning signs.

## **Transfer**

Hazardous substances are transported to and from the flammable lockers by fire personnel. New products are typically obtained from the Hazmat Department. Fuel is delivered to the emergency generator by a 1-inch aboveground line. The AST is filled on an as needed basis during routine weekly and monthly maintenance of the generator. Typical fuel transfers are on the order of twenty gallons.

## **Containment**

The flammable locker is metal and is equipped with internal containment in the base of the locker. The containment is adequate to hold the leak from one of the small containers stored inside the cabinet. The aboveground storage tank has a metal secondary containment pan adequate to contain the contents of the tank. The containment cell has a drainage valve. Fill port containment also exists on this tank. Absorbent materials are stored in large quantity in Building 135 to the south of Hangar 1.

In addition, the concrete flight apron is contained by a concrete curb and valved catchment basin system that abuts the west side of the building. Rollover berms are used in place of curb in vehicle access areas.

## **Drainage**

The area surrounding Hangar 1 is paved with asphalt or concrete. The area generally slopes west. Runoff from the north, east, and south sides of the hangar flows west and is contained by the flight line curbing and rollover berms on the west side of the hangar. Runoff from the west side of the building, in the area of the generator and AST would flow west toward A Street.

## **Spill Prediction**

Spill incidents could occur during delivery and use of the hazardous substances. The maximum expected spill volume for the hazardous substances would be the contents of one of the containers (probably less than 5 gallons). Spills of these materials would flow to the concrete inside or outside the hangar, and would likely be confined to a very small area. Spills inside the flammable locker would be held within the internal containment compartment of the locker. Spills occurring outside the flammable locker would flow onto the concrete slab or floor of the building and be easily cleaned up.

Minor spills may also occur while fueling the aboveground storage tank. Spills would likely flow to the secondary containment cell, where they could be easily cleaned up. The largest spill would result from the 1,500-gallon tank truck during fueling operations. In this case, the spill would flow to the asphalt parking lot and migrate west toward A Street. Larger spills could possibly enter a storm drain in the vicinity of Building 130; however, this is considered unlikely. A large quantity of spill response equipment is located at this site.

## **Security**

Building 137 is manned 24 hours a day by fire personnel. In addition, Hangar 1 is located inside perimeter flight line fencing along A Street. Access is controlled by a gate near Building 130. NAF El Centro is secured by a perimeter fence and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Administration of Building 137 is the responsibility of the Fire Department, while Brown & Root provides building and emergency generator maintenance services. Maytag provides the fueling services.

### **Recommended Corrective Action**

1. Modify the battery storage, possibly moving it inside closer to the generator. This locker, could cause unnecessary confusion during an emergency situation at this Facility.
2. Ensure drain valve is secured.

## 6.11 MAINTENANCE AND MECHANICAL SHOP, BUILDING 157

### **Facility Description**

This maintenance and mechanical shop is in Building 157 near the intersection of 4th and B Streets. The building is a one-story structure constructed of wood with a concrete foundation. The building is subdivided into numerous small work areas that are used for vehicle repair and miscellaneous wood and metal fabrication, and air conditioning repair.

The majority of the Activity vehicles are serviced in this building. Access to the building is provided by numerous doors around the perimeter of the U-shaped building.

### **Storage**

Small quantities of hazardous substances are stored inside Building 157, including oils, greases, and adhesives in the vehicle maintenance area. These daily-use items are stored in a flammable material storage locker (flammable locker) without secondary containment. The building also houses a detergent parts washer in the vehicle maintenance area. Compressed gases are stored behind the vehicle maintenance area and they are properly labeled and secured.

Outside the building, oil and fuel wastes are stored in a Hazwaste locker. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression and an exterior eye wash and fire extinguisher. The Hazwaste locker is marked with cautionary signs. Waste containers are placed on a rack-type floor over secondary containment.

## **Transfer**

Hazardous materials are procured from the Hazmat Center and transferred to the building by truck. The majority of the loading and unloading occurs in the vehicle maintenance area in the southwest corner of the site. Equipment to be washed is hand-carried or brought by small vehicle to the parts washer. Hazardous wastes are picked up from the outdoor storage locker by the Hazmat Center every two weeks, or as needed, and taken to the Hazardous Waste Compound (Building 530).

## **Containment**

The parts washer is a self-contained unit that has a small oil skimmer. Internal secondary containment exists within the parts washer. There is no secondary containment in the flammable locker in the vehicle maintenance area, but the Hazwaste lockers are equipped with secondary containment in the floor of the unit (approximately 175 gallons), which is adequate to contain leaks from the drums stored inside.

There is no secondary containment for most of the miscellaneous parts stored around the building perimeter and only a portion of the outdoor equipment is stored on an impervious surface.

Absorbent is located in the vehicle maintenance area.

## **Drainage**

Most of the area is flat with little slope. The area inside the U of the building slopes toward the maintenance area. A trench drain exists in this area to prevent runoff from entering the building. However, this drain is reportedly blocked and does not discharge to the storm drain. A second storm drain is located east of the vehicle maintenance area. The surrounding pavement slopes to this drain. However, it too is reportedly blocked, and does not discharge to the storm drain system.

## **Spill Prediction**

Inside, spills would flow to the concrete floor with minimal possibility of migrating outside. Indoor spills will usually amount to small quantities (less than 10 gallons) of oils, fuels, grease, or detergents occurring during maintenance. These spills would likely be contained on the concrete floor of the building. Spills from the parts washer would not likely reach the floor.

The largest spill would be from a 55-gallon drum during transfer of the waste from the maintenance area or from the Hazwaste locker. Spills or leaks inside the lockers would be contained within the internal secondary containment. Spills outside the lockers would flow uncontrolled to the soil within the yard. Spills in the vicinity of the building could reach one of the two storm drain catchment basins on the northwest and southwest sides of the building. Reportedly, these drains are blocked. However, this was not confirmed.

## **Security**

Building 157 is within a fenced yard, with access controlled by Brown & Root. The Hazwaste locker is locked and marked with warning signs. The Activity is further secured by a perimeter fence with armed guards that control the main gate and patrol the Activity. Only authorized personnel are allowed to NAF EI Centro.

## **Administration**

Brown & Root occupies, operates and maintains Building 157.

### **Recommended Corrective Action**

1. Product labeling could be improved; some labels are missing and/or hard to read.
2. Replace the existing flammable locker with one that has secondary containment.
3. Confirm the storm drain catch basins to the east and west of the Vehicle Maintenance Bay are permanently blocked.
4. Implement measures to protect storm drains from spills if they are active drains.
5. Provide drip pans or containment pallets for leaking parts and equipment around the yard.
6. Train Brown & Root employees in SPCC procedures (Section 5).

## **6.12 TRUCK MAINTENANCE SHOP, BUILDING 165**

### **Facility Description**

Building 165 is within the Brown & Root civilian contractor complex at the intersection of North and East Streets. The building is divided by walls into three main rooms: the east and center rooms are mostly empty and the west room stores various containers of oil, oil products, and a parts washer located at the southwest corner. The building is wood and has concrete-paved floors and rollover doors that remain open during the day. The primary activity conducted at Building 165 is truck maintenance on the west side of the building. The surrounding ground of the building is paved with asphalt to the north and unpaved to the south.

### **Storage**

Large quantities of hazardous substances are stored in the truck maintenance area. Several 55-gallon drums of oil, hydraulic fluid and antifreeze are stored on small metal containment pallets. Two square steel ASTs are also located in the truck maintenance area on steel containment pallets; one 80-gallon and one 240-gallon. A flammable material storage locker (flammable locker) and one 5-gallon drum of used and oily rags rest on secondary containment.

Finally, there is a Hazwaste locker south of the building to store wastes. The locker is fairly new and in good condition. Wastes in the locker were orderly, labeled, and grounded. The exterior of the locker is marked and contains an eye wash, fire extinguisher, and spill kit.

### **Transfer**

Hazardous materials are delivered by truck or are hand-carried to Building 165 for storage and use. Wastes are picked up by the Hazmat Center each week

(Wednesdays), or as needed. Wastes are transported to the Hazardous Waste Compound (Building 530).

### **Containment**

The metal cabinet and flammable locker lack secondary containment. However, they are located inside and present minimal spill risk. The larger quantity storage containers, the 55-gallon drums of oil and hydraulic fluid, and the 240- and 80-gallon tanks are placed on metal containment pallets that are too small to contain the contents of one of the drums or tanks in the event of a release. Tanks have inadequate or no secondary containment, no level indicators, are not secured, and have pneumatic pumps with no automatic shutoff. In addition, the pallet that the 80 and 240-gallon tanks rest on is damaged. The used oil drums are stored on the concrete floor of the room without secondary containment.

Wastes stored inside the Hazwaste locker have adequate secondary containment that is internal to the locker (approximately 175 gallons). Further, a spill kit is located adjacent to the locker.

### **Drainage**

The area north of the building is asphalt paved and slopes to the storm drain (reportedly blocked) northwest of the building, near Building 157. The south side of the building is unpaved and relatively flat. Drainage in this area flows south toward North Street. No drainage controls are currently in place at this building other than former floor drains in the center bay and behind the building that have been permanently sealed with concrete.

### **Spill Prediction**

Spills from any of the hazardous substances and oil/oil products stored in Building 165 could occur during delivery, storage, and transfer operations. The maximum spill would

be the contents of 240-gallon motor oil tank. Spills associated with the large quantity containers would not be contained within the building. They would likely migrate north to the parking lot and to the storm drain catchment basin, which is reportedly blocked. Spills in the area of the Hazwaste locker could occur during waste transfer operations. Spills inside the locker would be contained by secondary containment. Spills outside the locker would flow to the gravel surface, and would not migrate far from the spill site. Absorbent could be quickly applied from the adjacent spill kit.

### **Security**

The building is located within a fenced yard. Access to the building is controlled by Brown & Root. Further, the entire Activity is fenced and security staffs the main gate 24 hours a day and conducts regular patrols. Only authorized personnel have access to the Activity.

### **Administration**

Brown & Root occupies, operates and maintains Building 165.

### **Recommended Corrective Action**

1. Provide absorbent in the truck maintenance area of Building 165.
2. Train employees in SPCC procedures (Section 5).
3. Provide flammable storage lockers.
4. Install secondary containment for the oil tanks.
5. Replace tanks with double walled tanks.

## **6.13 BASE OPERATING SERVICES (BOS) STORAGE YARD**

### **Facility Description**

The Base Operating Services (BOS) Storage Yard is located northeast of B Street and North Street. A number of buildings and equipment are located in this yard. Buildings 157 and 165 are described in the preceding sections. The yard area is gravel-surfaced and asphalt paved. The yard is primarily used for equipment and miscellaneous parts storage. Two portable generators are stored in the BOS storage yard. One generator is a 15-kilowatt generator. The second portable generator is a 100-kilowatt generator.

### **Storage**

The portable generators are powered by diesel fuel. One generator has a 50-gallon fuel tank and the other is a 110-gallon fuel tank. The generators do not have secondary containment.

### **Transfer**

Diesel fuel is added to the emergency generators on an as-needed basis. Fuel is transferred to the tank at the Government service station or from a tank truck through the fill port in the top of the tank. The generators are checked and operated monthly by Brown & Root as part of the routine preventative maintenance inspection.

Regular servicing of the transformers is not necessary and dielectric fluid transfers rarely occurs.

### **Containment**

Some of the portable generators and transformers have secondary containment. The generators are placed/parked on gravel surfacing and stored on wood pallets or secondary containment on asphalt.

## **Drainage**

The area at the BOS storage yard is flat and partially unpaved. The yard slopes to the north and to the west near the generators.

## **Spill Prediction**

Minor spills may occur during filling of the 50- and 110-gallon diesel fuel ASTs. Spills in the yard area would flow to the soil. The largest potential leak would be failure of the 110-gallon tank. In this case fuel would flow to the ground surface, and possibly to the storm water ditch that parallels B Street. It is anticipated that a worst-case spill would not migrate far from the site.

## **Security**

The BOS storage yard is fenced and access is controlled by Brown & Root. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. Activity security also patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Monthly preventative maintenance inspections of the tanks are conducted by Brown & Root. Maytag and/or Brown & Root provide fueling services.

## **Recommended Corrective Action**

1. Provide ready access to drip pans in the event of a leak from one of the generators.

## **6.14 NAVY EXCHANGE SERVICE STATION, BUILDING 200**

### **Facility Description**

The Navy Exchange (NEX) Service Station is located along 1st Street, west of A Street. This facility consists of a single-story convenience store/office, two double walled 10,000-gallon aboveground storage tanks (ASTs), and four fuel-dispensing pumps. The pumps are located on a pump island that is sheltered by a canopy-style roof. Most of the property is paved with concrete or asphalt. The two ASTs are inside a concrete containment cell approximately 100 feet northeast of Building 200. Perimeter bollards have been installed for general protection of the containment cell from vehicle traffic. Fuel lines that service the ASTs are aboveground at the tanks and underground between the tanks and the pump island. An emergency fuel shutoff switch is located inside the store/office building. In addition, an earthen drainage ditch traverses the northeast and west sides of site.

### **Storage**

The two ASTs at the NEX Service Station were installed in 1993 and are used to store premium unleaded and regular unleaded gasolines. The tanks are of steel construction, double walled, rectangular shape, and each has a 10,000-gallon capacity. The tanks are oriented horizontally and positioned side-by-side within a concrete secondary containment cell. Both ASTs are accessible by manholes on the top of the tanks. The ASTs reportedly have level indicators; however the equipment was not functioning at the time of the survey. For corrosion protection, the ASTs and the aboveground lines are painted. Cautionary signs are posted on the tanks.

Hazardous substances are not used or stored in large quantities at the NEX Service Station.

## **Transfer**

The fuel storage tanks are filled by commercial tanker trucks. The tank fill ports are accessible from the south via an asphalt drive. Approximately 30,000 gallons of fuel are delivered monthly. Tank fill port connectors are camlock and all transfers are visually monitored. The tanks are reportedly fitted with a high-level audible alarm. The pump island is serviced by underground steel pipes. The underground lines pass underneath the drainage swale, the asphalt access road, and the station drive areas. The underground lines are double walled for cathodic protection.

## **Containment**

Secondary containment for the two fuel tanks is a single-perimeter concrete wall with a capacity capable of holding approximately 120 percent of the contents of one of the tanks. The perimeter containment wall is fitted with a locking valve for controlled drainage discharge.

The dispensing stations are located on and surrounded by concrete that provide limited protection to the environment. However, secondary containment does not exist in this area.

The access road is sloped toward the tanks in the event of a release from the tank truck during filling operations.

## **Drainage**

The area around the store/office building is paved to the south and east and unpaved to the north and west. The surrounding topography is relatively flat, sloping down toward the earthen drainage ditch approximately 80 feet north and 200 feet east and west of the building. In the vicinity of the tanks, the ground surface is unpaved except for the access road that circles the tanks. The road and the ground surface within the road slope down gently toward the secondary containment wall providing additional drainage

and spill control. In the vicinity of the pump island, the concrete slopes down, east to the drainage ditch and south to 1st Street.

### **Spill Prediction**

Spills are most likely to occur during filling of the 10,000-gallon ASTs or fuel dispensing. The largest spill possible would occur from tanker trucks carrying 5,000 to 8,000 gallons of fuel. Spills resulting from a transfer hose or fitting leaks would likely be contained within the secondary containment cell. A spill at the tanker truck would flow to the asphalt pavement, then migrate towards the unpaved soils surrounding the storage tanks. A rapid release of the entire truck contents would be the most probable way for a spill to reach the earthen drainage ditch.

A release from the underground lines may go undetected for some time. Annual tightness testing and inventory control should be used to monitor for line leaks.

### **Security**

The tanks are not enclosed within a perimeter fence. However, they are somewhat secured by the containment wall and bollards, and the Activity security patrols this area as part of their regular route. In addition, access to NAF El Centro is limited as the entire Activity is fenced and the main gate is staffed 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro.

### **Administration**

NEX personnel are responsible for operation (including routine inspection) of the two ASTs and lines at Building 200. Maintenance is performed by Brown & Root on an as needed basis. Operation and maintenance records are maintained by NEX. Fuel is delivered by an outside contractor.

### **Recommended Corrective Action**

1. Perform and document inspections according to standard operating procedures and checklists provided in Annex 2. Provide the results of these evaluations to Public Works Department-Environmental Division.
2. Provide rollover containment around dispensing station.

## **6.15 NAVY EXCHANGE - EMERGENCY GENERATOR, BUILDING 201**

### **Facility Description**

The Navy Exchange consists of a grocery and general store along the north side of 2nd Street between A and B Streets. A 45-kilowatt and a 4.5-kilowatt emergency generator are adjacent to the building. Two 50-gallon aboveground tanks supply diesel and gasoline fuel to the emergency generators. Presently, only the gasoline generator is being used due to “out of service” status with the diesel generator. A canopy over the two ASTs provides protection from the elements. The emergency generators supplied power to two refrigeration units that are no longer in use because the new Commissary (Building 210) is now in operation. Future plans for the former commissary include the expansion of the existing Navy Exchange. Generators have been removed though one AST remains in place.

### **Storage**

There is no oil or hazardous substances inside Building 201 (Commissary). However, gasoline and diesel fuel is stored outdoors in two 50-gallon rectangular steel ASTs. The tanks are adequately labeled and painted for protection. Both tanks have secondary containment. A site-specific inventory of materials is presented in Annex 7.

### **Transfer**

Aboveground fuel lines supply fuel to the generators. The fuel storage tanks are filled from a 1,500-gallon tank truck. The tanks are topped off as part of the weekly and monthly preventative maintenance inspection (as needed). Fuel transfer is typically on the order of 5 gallons.

## **Containment**

Both aboveground gasoline and diesel fuel tanks have metal secondary containment that is sufficient to hold the capacity of the tank. Absorbent material is not located on-site, but it is available through the Hazmat Department on an as needed basis. Fuel tankers are also equipped with absorbent material.

## **Drainage**

The area outside the building is flat and irrigated. Runoff migrates away from the building in all directions.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tanks. These spills and any tank leak would flow to the secondary containment cell. The worst-case release would be from the 1,500 tank truck used to fill the tanks, which would flow to the parking lots and possibly flow to a storm drain.

## **Security**

One tank is fenced, but the other is not. However, the entire Activity is fenced and the main gate is manned 24 hours a day. Only authorized personnel are allowed to be on the NAF El Centro base. The Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by both Brown & Root and on occasion by NAF El Centro personnel. Maytag provides the fueling services.

### **Recommended Corrective Action**

1. Provide absorbent materials near ASTs or inside building.
2. Decommission the diesel generator.

## **6.16 LIQUID OXYGEN/NITROGEN STORAGE, BUILDING 204**

### **Facility Description**

Building 204 is a single-story modular office building that serves as a control office for a fenced compound used to store liquid oxygen and liquid nitrogen. The site is west of and just outside the intersection of Taxiways D and E, near Hangar 5. The compound is a concrete pad partially covered by a canopy. The area inside the compound is concrete-paved with a 6-inch curb surrounding the perimeter, while the area outside the compound is unpaved. The storage area consists of four ASTs, fourteen portable tanks, and several compressed gas cylinder storage.

### **Storage**

There are two 2,000-gallon ASTs of liquid oxygen and two 1,000-gallon ASTs of liquid nitrogen within the compound. The tanks have custom controls that facilitate storage of these materials. Fourteen portable tanks (some full, others empty) of liquid oxygen and nitrogen are stored within the containment area under the canopy. Compressed gas cylinders are also stored in the compound. All equipment is properly staged, stored, and labeled. All storage devices appeared in good condition. While liquid oxygen and nitrogen are not in themselves hazardous materials, when liquid oxygen is exposed to oil and oil products, it creates a serious fire hazard.

### **Transfer**

The liquid oxygen and nitrogen are typically delivered to the site monthly by an outside contractor. The contractors fill the large ASTs. Liquid oxygen and nitrogen are transferred into small trailer-mounted cylinders for use on aircraft by Maytag personnel. Trailers are staged under canopies within the compound and on the flight line east of the compound.

## **Containment**

The entire compound is contained by a 6-inch concrete curb to prevent outside contaminants from entering the compound. The ASTs are contained in a separate curbed area with two gravel-filled sumps designed to collect spilled product. Liquid oxygen and nitrogen readily vaporize to the atmosphere. All of the portable cylinder carts are stored within the containment curb and under the canopy. Drip pans are used during filling of portable cylinder carts.

## **Drainage**

The concrete working pad is elevated several inches from the surrounding ground surface. This, coupled with the 6-inch curb, restricts outside liquid contaminants from entering the containment area. Drainage in the area of the ASTs flows to the gravel sumps. In the northwest corner of the cylinder cart staging area, the containment curbing is breached to allow drainage to exit the containment curbing, as frequent hose-down of the concrete pads are necessary.

## **Spill Prediction**

Upon release to the atmosphere, the liquid oxygen and nitrogen immediately vaporize into gas. Smaller spills resulting from handling of the tanks or from minor valve leakage would therefore occur as a gas leak to the air. Larger releases would occur as liquid oxygen or nitrogen to the concrete pavement flowing by gravity to one of the two containment gravel sumps, where the liquid would vaporize fairly quickly.

## **Security**

NAF El Centro is secured by a perimeter fence, a 24-hour-a-day manned main gate, and regular security patrols. The LOX/NIT compound is further protected by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. Maytag controls access to the compound. Hazardous warning signs, and signs prohibiting the presence

of oil products from the containment area, in both English and Spanish are posted on the fence. Inside, the compound area is lighted. Emergency equipment includes a fire extinguisher and an eyewash.

### **Administration**

Maytag is responsible for operation of the compound and maintenance of the tanks.

### **Recommended Corrective Action**

1. No actions are required.

## **6.17 COMMISSARY - EMERGENCY GENERATOR, BUILDING 210**

### **Facility Description**

The Commissary is a relatively new facility, having opened in December 1996. The facility is located northwest of the intersection of 2nd Street and A Street. A 20-kilowatt emergency generator is housed outside the building on a concrete slab on the west side of the building. A 25-gallon cylindrical steel tank attached to the generator provides the generator with emergency diesel fuel.

### **Storage**

There is no oil or hazardous substance inside Building 210. However, diesel fuel is stored outdoors in a 25-gallon cylindrical steel AST (installed in 1996) on the west side of the building. The tank is fairly new and is in good condition. The generator and tank are on a concrete pad, but the tank does not have secondary containment. On the north east side of the building near the commissary air conditioning unit, acids and alkalis are stored in a small wood shed.

### **Transfer**

The fuel storage tank is filled from a portable fuel can. The tank is topped off as part of the weekly and monthly preventative maintenance inspection (as needed). Fuel transfers are typically on the order of 1 to 2 gallons.

### **Containment**

There is no secondary containment for the aboveground storage tank. Absorbent material is not stored on site, but it is available through the Hazmat Department on an as needed basis. The acid/alkali storage area has a concrete secondary containment.

## **Drainage**

The area outside the building is flat and has both paved and unpaved areas. Spillage occurring during fuel filling could contaminate the soil adjacent to the building, but it is unlikely that the spill would migrate beyond the immediate vicinity of the generator.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. Spills would flow to the soil surrounding the concrete pad and not migrate beyond the immediate vicinity of the generator.

## **Security**

The site is not fenced. However, the entire Activity is fenced, and the main gate is manned 24 hours a day by security. Only authorized personnel are allowed to be on NAF El Centro. In addition, the Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by Brown & Root. NAF El Centro personnel occasionally inspect these sites.

## **Recommended Corrective Action**

1. Provide adequate secondary containment for the outside aboveground storage tank.
2. Provide absorbent in the vicinity of the tank or inside Building 210.

## **6.18 HANGAR 4, BUILDING 218**

### **Facility Description**

Maintenance Hangar 4 is east of A Street, west of the south end of Taxiway E. Building 218 consists of an aircraft maintenance hangar and an associated hazardous materials accumulation area. The building is a one-story hangar constructed of wood with a metal frame. The hangar has a concrete floor and concrete pavement surrounds the building. A trench drain surrounds three sides of the building. Repair and maintenance of aircraft is conducted within the hangar and on the apron area surrounding the hangar. Equipment for aircraft ground support and maintenance is stored inside the hangar.

One hazardous waste locker (Hazwaste locker) used by the building tenants are near the perimeter curb at the northwest corner of the building.

### **Storage**

Small (daily-use) quantities of flammable materials, paints, and oils are commonly used and stored inside the hangar. These products are stored in a flammable materials storage cabinet (flammable locker) inside the hangar. Typically, the total quantity of these products stored on site is less than 20 gallons.

Maintenance activities typically generate large quantities of waste liquids such as used oil, hydraulic fluid, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities. Collected wastes are consolidated in 55-gallon drums temporarily stored in the outdoor Hazwaste lockers. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression, interior lighting, and exterior eye wash and fire extinguishers. The locker is also marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker. All wastes are adequately labeled and grounded.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

Two metal Ready Storage Lockers (RSLs) are located outside the perimeter curb at the southwest corner of the building. The RSLs are used to store live ammunition (as necessary). However, these materials are very short-term storage items (1 to 2 days).

### **Transfer**

New chemical products required for maintenance activities are procured from the Hazmat Department on a daily basis. Only daily-use quantities are distributed. Chemical products are transported by vehicle to the hangar.

Waste materials generated inside the hangar are collected in 2 to 5-gallon containers and transferred to the Hazwaste locker on a daily basis. Hazardous wastes are stored inside the locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of containers once they are full. Hazmat (Building 512) collects waste every week (Wednesdays), or sooner if needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated on a weekly basis.

## **Containment**

The flammable locker has a secondary containment cell in the bottom of the locker. This cell can contain spills from the small containers stored inside the cabinet. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to contain the entire contents of at least one of the containers stored in the locker.

In addition, the concrete flight apron is contained by a concrete curb and valved catchment basin system that parallels the west side of Building 218. Rollover berms replace curbing in areas where vehicle access is required.

Spill kits are also stored inside the building near the flammable locker materials storage cabinet and inside the compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate small-scale spills.

## **Drainage**

The concrete flight apron in the vicinity of Building 218 slopes to the southwest toward the building. Runoff in the vicinity of the hangar would flow southwest and be contained by the concrete curbing and valved catchment basin system that surrounds the flight apron. Any liquid collected in the catchment basin is inspected by the Environmental Division before it is released to the storm drain system.

The floor of the hangar slopes toward the grated trench drain surrounding the building. The trench drain slopes down to the southwest corner of the drain where collected liquids are contained by a closed valve.

## **Spill Prediction**

Spills will usually amount to small quantities of oils that will be contained in the flammable locker, or flow to the concrete floor of the hangar. Larger spills would migrate out of the hangar to the trench drain. Spills on the aircraft apron will migrate west and either be collected by the trench drain or the containment curbing and catchment basins on the west side of this building.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment curbing. However, the entire contents of the drum would be contained by the curb and catchment basin. Cleanup could be accomplished using on-site materials.

## **Security**

Building 218 is located within the flight line fencing, and Activity security conducts regular patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Brown & Root Transient Line operations schedule the use of Building 218. This hangar is used by transient squadrons while training at the Activity. The Hazmat Department is responsible for coordinating all product issue and waste disposal for the building.

## **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this building.
2. Conduct SPCC procedures review for all squadron Hazmat coordinators.

## **6.19 SMOKE OIL STORAGE, BUILDING 220**

### **Facility Description**

Building 220 is a relatively new facility constructed in December 1996. The building is located east of A Street and north of 1st Street between Buildings 218 and 225. The facility is located adjacent to (but not contained within) the perimeter containment curbing surrounding the concrete flight apron. The building houses a 5,000-gallon horizontally mounted steel AST and one dispenser. The tank is positioned inside a containment cell and is elevated approximately 6 inches off the ground with steel support footings. The tank is equipped with a high level alarm. The dispensing pump is connected to the tank with 2-inch diameter aboveground pipes.

### **Storage**

Smoke oil is stored in the single 5,000-gallon AST, with the maximum storage occurring only during the winter months (November through April), while the Navy's Blue Angels are training at NAF El Centro. The tank is new, and in good condition. It is inside a metal containment cell, which is inside a concrete containment cell. The AST is painted for corrosion protection and adequately marked with warning signs. The tank has an audible and light to warn of high-level conditions. Access ports are located on top of the tank.

### **Transfer**

Smoke oil is delivered to the tank from a 5,000 to 8,000-gallon commercial tanker truck by an outside contractor. This transfer occurs on the flight apron within the containment curbing. Smoke oil is dispensed from the tank with a gasoline-station-type dispensing pump.

## **Containment**

Secondary containment is provided for the oil storage in the form of a 3-foot steel containment cell capable of holding 110 percent of the tank volume (5,500 gallons). This containment cell is fitted with a locking valve for drainage control. The dispensing pump is also located within the containment cell. All this is also inside a concrete containment wall; however, one corner of the concrete cell has been retrofitted with an 8-inch high rollover berm.

Absorbent is not provided on-site, but it is available in Hangar 5 for personnel who will be using the tank. Absorbent is also available from the Hazmat Department.

## **Drainage**

The area surrounding three sides of the tank is unpaved and relatively flat. Surface drainage flows to the northwest toward the drainage swale parallel to A Street. Drainage control is provided by the secondary containment cell around the tank, which has a drain with control valve. The fourth side is next to the concrete apron.

## **Spill Prediction**

Spills could occur during filling of the tank or while dispensing from the tank. The largest possible filling spill would occur from the tanker trucks. Leaks at the tank filling port would be contained within the secondary containment cell. Leaks from the tanker trucks would flow to the concrete flight apron and be contained within the flight apron containment curbing.

A large-scale spill (5,000 to 8,000 gallons) from the tanker trucks would be contained by curbing. It is unlikely that a spill would reach the drainage ditches located along A Street. Spills at the dispenser would flow to the containment cell oil concrete flight apron and be contained by the perimeter curbing.

## **Security**

The entire Activity is fenced and access is controlled at the main gate with armed guards. Access to the Activity is restricted to authorized personnel. In addition, the tank is within the perimeter fencing that surrounds the flight line. Access to the flight line is further controlled with a series of gates. Security patrols this area as part of their regular rounds.

## **Administration**

Operation and maintenance of the tank is performed by Brown & Root as part of the Transient Line operations. The tank is inspected regularly. An outside contractor supplies the smoke oil.

## **Recommended Corrective Action**

1. Install cautionary and flammable warning signs at the facility.
2. Perform and document inspections according to standard operating procedures and checklists provided in Annex 2.
3. Provide a spill kit next to the tank.
4. Provide fire extinguishers next to the tank.

## **6.20 GROUND SUPPORT EQUIPMENT, BUILDING 222**

### **Facility Description**

NAF El Centro's ground support equipment is stored at Building 222, which is south of the intersection of A and 2nd Streets just outside of the aircraft parking apron. The building is a single-story wood structure. A fenced area is located to the north of the building. A wash rack is located within the fenced area.

### **Storage**

Small quantities (less than 5-gallons each) of spray paints, oils, lubricants, and surfactants are kept in two flammable materials storage lockers (flammable lockers) inside the building. Hydraulic fluid, antifreeze, cleaning compound, and used batteries are also stored inside.

Hydraulic fluid, antifreeze, and various lubricating oils are stored in metal and plastic 25- to 55-gallon drums. Some of the drums are sitting directly on the concrete floor inside Building 222. There is one metal containment pallet that holds five of the drums.

Waste oil, antifreeze, sludge (from the wash rack) and used oil filters are kept in the Hazwaste lockers outside. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression, lighting, and an exterior eyewash and fire extinguisher. The locker also is marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment.

Some items stored at this one facility lack proper labeling, and there appears to be excessive quantities of selected items.

## **Transfer**

Hazardous materials used at the building site are delivered by Brown & Root and placed in the flammable locker (as appropriate). Hazardous wastes generated by facility activity are placed in drums and stored in the Hazwaste locker. The Hazmat Department picks up waste each week (Wednesday), or sooner as requested. All wastes are transported to the Hazardous Waste Compound (Building 530) by truck.

## **Containment**

The secondary containment structures outside the building in the fenced area are two metal pallets and each holds 4 drums. Inside the building, the flammable lockers are equipped with internal containment sufficient to hold the contents of a spill from within the lockers. Various 25- and 55-gallon drums are kept on the shop floor without secondary containment. Absorbent is located in the yard area.

## **Drainage**

The area is typically flat with a slight slope to the west toward A Street. In the vicinity of the wash rack, the pavement slopes to the drain. Wash water passes through an oil-water separator to the sanitary sewer.

## **Spill Prediction**

Spills in the yard area would be contained by secondary containment (if present). Other spills would flow onto the concrete pavement and into the sump beneath the wash rack. As some of the containers are stored in close proximity to the dirt ground, a significant spill event could reach the ground surface. Inside the building, the internal containment of the flammable locker controls spills from within the lockers. Small quantity spills outside of the cabinets would flow to the concrete floor and would probably not migrate outside.

## **Security**

The area outside of Building 222 is secured by a 6-foot high chain-link fence. Although the gate does have a lock, at the time of this investigation, the gate was not locked. The outside yard is lighted and has fire extinguishers. No smoking and other hazardous substances warning signs are posted. NAF El Centro is fenced with access controlled by a guard 24 hours a day. Activity security also conducts routine patrols.

## **Administration**

NAF El Centro Base Operations is responsible for the administration of Building 222, while Brown & Root maintains the building and fenced yard.

## **Recommended Corrective Action**

1. Reduce current inventory of hazardous substances stored on-site. Implement the daily-use procurement program.
2. Provide absorbent on-site.
3. Ensure all significant materials stored on site are properly and clearly labeled.
4. Obtain corrosive lockers for acid storage.

## **6.21 HANGAR 5, BUILDING 225**

### **Facility Description**

Maintenance Hangar 5 is in the southwestern corner of the concrete aircraft parking apron near the intersection of Taxiways D and E. Building 225 consists of the hangar, an associated hazardous materials accumulation area, and a barbed wire fenced storage area. The building is a one-story hangar constructed of wood with a metal beam framework. The hangar has a concrete floor and concrete pavement surrounds the building. Repair and maintenance of aircraft is conducted within the hangar and on the apron area surrounding the hangar. Equipment for aircraft ground support and maintenance is stored within the hangar. The aircraft parking apron adjacent to the hangar is used for transferring aviation fuel from fueling trucks to aircraft.

A metal Hazwaste locker is associated with this building and is located directly outside near the northwest corner of the building.

### **Storage**

Small (daily-use) quantities of paint, oil, antifreeze, and lubes are commonly used and stored inside the hangar. These products are stored in a flammable materials storage locker (Flammable locker) inside the hangar. Typically, the total quantity of these products stored on site is less than 20 gallons.

Maintenance activities at Hangar 5 typically generate large quantities of waste liquids such as used oil, hydraulic fluid, engine oil, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities. Collected waste is consolidated in 55-gallon drums stored in the outdoor Hazwaste locker. Solid hazardous materials such as used absorbent, empty cans of hydraulic fluid and oil, rags soiled with engine oil, hydraulic fluid, and aviation fuel (JP-5) are also stored in 55- and 35-gallon drums inside the Hazwaste locker. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire

suppression, interior lighting, and exterior eye wash and fire extinguishers. The locker is also well marked with cautionary signs. Hazardous waste containers are placed a rack-type floor over secondary containment inside the locker.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

### **Transfer**

Waste materials generated inside the hangar are collected in 55- and 35-gallon drums and transferred to the waste locker on a daily basis.

Hazardous waste is stored inside the locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesday), or they can be contacted as needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated on a weekly basis. New chemical products required for maintenance activities are procured from Hazmat on a daily basis. Only daily-use quantities are distributed. Chemical products are transported by vehicle to the hangar.

### **Containment**

The metal flammable locker has a secondary containment cell in the bottom of the locker. This cell is capable of containing spills from small quantity containers stored inside the locker. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to contain the entire contents of at least one of the containers stored in the locker. The locker is placed on the pavement behind the curbing with no additional containment provisions around it.

Spill kits are also stored inside the building near the flammable lockers and inside the compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate typically small-scale spills.

The building is surrounded by a trench drain. This drain will provide collection of liquids migrating out of the building, as well as from the flight apron. The trench slopes down to the northwest corner of the drain.

In addition, the concrete flight apron is contained by a concrete curb and valved catchment basin system that parallels and abuts the west side of the building. Rollover berms replace curbing in areas where vehicle access is required.

### **Drainage**

The concrete flight apron in the vicinity of Building 225 slopes to the southwest toward the building. Runoff in the vicinity of the hangar would flow southwest and be contained by the concrete curbing and valved catchment basin system that surrounds the flight apron. Any liquid collected in the catchment basin is inspected before it is released to the storm drain system.

The floor of the hangar slopes toward the grated trench drain surrounding the building. The trench drain slopes down to the northwest corner of the drain, where a closed valve controls the discharge. Small spills to the floor would pool on the concrete floor. It is unlikely that small quantities of hazardous materials used inside the building would migrate outside in the event of a spill.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of oils and would be contained in the flammable storage cabinet or flow to the concrete floor of the hangar. It is unlikely that a spill inside the hangar would migrate outside. Larger spills would be collected by one or both of the collection systems.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment curbing. However, the entire contents of the drum would be contained by the curb and catchment basin. Cleanup could be accomplished using on-site materials.

There is negligible spill potential to the sanitary sewer system, or storm drains.

## **Security**

Building 225 is located within the flight line fencing, and the Activity security maintains regular patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Brown & Root Transient Line operations schedule the use of Building 225. This hangar is used by transient squadrons while training at the Activity. The Hazmat Department is responsible for coordinating all product and waste distributed to and collected from the building.

### **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this building.
2. Conduct SPCC procedures review for all squadron Hazmat coordinators.

## **6.22 AUXILIARY BEACON - EMERGENCY GENERATOR, BUILDING 230**

### **Facility Description**

The Auxiliary Beacon (Building 230) is north of A Street and south of the aircraft parking apron. The building consists of a metal-frame tower and an emergency generator. The pad-mounted generator supplies back-up power for the airfield beacon. A 110-gallon AST, which is attached to the generator, contains emergency diesel fuel. The ground surface surrounding the building is unpaved.

### **Storage**

Diesel fuel is stored in a 110-gallon AST. The tank is secured to a concrete pad and does not appear to have secondary containment. The fill port is the only access to the tank, and no high level alarms exist on the tank. The tank is painted for corrosion protection. The tank is marked with cautionary signs.

No hazardous substances other than diesel fuel are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST when needed. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top off the fuel tank (as needed). Typical fuel transfers are less than twenty gallons.

### **Containment**

This AST does not appear to have secondary containment. Further, there is no berm. Absorbent material is not provided at Building 230; however, limited quantities of absorbent material are typically available on the tank trucks.

## **Drainage**

The area surrounding the generator is flat and unpaved. There is a slight slope to the north toward the airfield approximately 10 feet north of the generator. The concrete curb that surrounds the airfield exists just north of the generator.

## **Spill Prediction**

Minor spills may occur during filling of the 110-gallon diesel fuel AST. These spills would generally flow to the ground surface. Tank leaks and fuel line leaks would also flow to the ground surface. The largest potential leak would result in the event of a release from the 1,500-gallon tank truck or hose. In this case, fuel would flow to the ground surface, and possibly to the concrete-lined stormwater ditch west of the generator.

## **Security**

There is no additional security around this building. However, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. The Activity security patrols this area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

## **Recommended Corrective Action**

1. Provide AST secondary containment.
2. Install secondary containment for Day Tank, estimated 25-gallon storage.

## **6.23 EMERGENCY GENERATOR, BUILDING 285**

### **Facility Description**

Building 285 is located southwest of A Street and 3rd Street. The building consists of a single-story structure of masonry block construction. A 35-kilowatt generator is housed inside Building 285. Diesel fuel is stored outdoors in a 110-gallon steel AST. The pad-mounted 110-gallon AST supplies diesel fuel to the emergency generator. The ground surface surrounding the building is paved with asphalt.

### **Storage**

Diesel fuel is stored in the 110-gallon AST. The tank is in a secondary containment cell that is secured to a concrete pad. The fill port is the only access to the tank, and no high-level alarm exists on the tank. The tank is covered, painted for corrosion protection, and it is marked with cautionary signs. The tank also has bollards for protection from vehicle traffic.

No hazardous substances other than diesel fuel are used or stored at this facility.

### **Transfer**

An aboveground pipe connects the AST to the generator. Diesel fuel is added to the AST as needed. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top off the fuel tank (as needed). Typical fuel transfers are less than twenty gallons.

## **Containment**

The AST is in a metal secondary containment cell that has a capacity to contain the entire contents of the tank (110 gallons). The containment cell is fitted with a drain valve. The fill port also has containment. Absorbent material is not provided at Building 285; however, limited quantities of absorbent material are typically maintained on the tank trucks.

## **Drainage**

The area outside the building is flat and unpaved. There is a slight slope to the east toward the drainage ditch that parallels A Street, approximately 40 feet east of the building.

## **Spill Prediction**

Minor spills may occur during filling of the 110-gallon diesel fuel AST. These spills would generally flow to the secondary containment where they could be cleaned up. Tank and line leaks at the tank would also be collected in the secondary containment cell. The largest potential leak would result in the event of a release from the 1,500-gallon tank truck or hose. In this case, fuel would flow to the ground surface, and possibly to the stormwater ditch along A Street.

## **Security**

There is no additional security around this building. However, the entire Activity is fenced and the main gate is manned 24 hours by armed guards. Only authorized personnel are allowed access to NAF El Centro. The Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

## **Recommended Corrective Action**

1. Provide absorbent inside the building.
2. Ensure the drain valve is secured.

## **6.24 WELLS AIR START (NORTH), BUILDING 286**

### **Facility Description**

Two Wells Air Start systems are located at NAF El Centro. The Wells Air Start (North) system, Building 286, is on the flight apron immediately south of Building 127 (Hangar 2), while the other is between Hangars 8 and 9 (south area). The Wells Air Start system provides air pressure to jet engines, and consists of three compressor units, three banks of cylindrical air tanks, and two air lines that extend out toward the runway in the aircraft staging area. The compressor units are covered with a canopy-type metal frame roof. Condensate (oil/water mixture) is generated within the compressor during operation. This waste liquid is collected in the compressor knock-out pot and is manually discharged twice each day (during operation) to a 100-gallon AST located adjacent to the storage cylinders. Oily waste is also generated from internal compressor filters during compressor operation. This waste is transmitted by gravity to a 5-gallon bucket located near the compressors.

### **Storage**

Waste oil is drained from the compressor to a 5-gallon container located adjacent to each compressor. This is accomplished internal to the compressor. Condensate, mixed with small quantities of oil, is drained from the air tanks and stored in a stand-mounted 100-gallon AST (approximately 4 feet off the ground). The tank has secondary containment. However, it is not labeled and has no warning signs. The tank is not within the flight apron containment curbing or protected by bollards.

### **Transfer**

Oil discharged from the compressor is collected in 5-gallon buckets. The buckets are emptied into 35-gallon drums or taken directly to the hazardous waste compound for disposal. Condensate drained from the air tanks is collected in the AST, transferred to drums, and transported to the hazardous waste compound (Building 530). These

transfer operations are conducted as part of routine maintenance. The volume of waste is highly variable depending on use of the system.

### **Containment**

The Wells Air Start system (i.e. air tanks, compressors, and oil waste collection buckets) is inside the flight apron secondary containment curbing. The 100-gallon AST is not within the containment curbing, but it has been retrofitted with a metal containment pan adequate to contain the contents of the tank. However, because the tank is elevated, the secondary containment will not be effective if the tank overturns.

### **Drainage**

Surface runoff from the facility flows west to the secondary containment curbing where it is collected in a series of valved catch basins. Collected liquids are discharged only after inspection and documentation by the Environmental Division (Figure 4).

### **Spill Prediction**

Potential sources of waste oil spills include overfilling the waste oil bucket, spills during draining of the oil-water separator, and overturning of the 100-gallon AST of wastewater/oil mixture. The largest spill volume would be the 100-gallon AST. Because this is not located inside the containment curbing the spill would flow into the soil and migrate west. It is unlikely that the spill would migrate far from the spill site.

### **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Security personnel patrol this area as part of their regular rounds. Additionally, this Wells Air Start system is within the secured runway area.

## **Administration**

The civilian contractor, Dyncorp, is in charge of operation, maintenance and documentation of events for Building 286.

## **Recommended Corrective Action**

1. Provide bollards around the tank stand to minimize the possibility of vehicle traffic damaging the tank, if it remains outside the curbing.
2. Provide warning signs on the tank as to its contents and hazards.
3. Provide a spill kit at the site.

## **6.25 EMERGENCY GENERATOR, BUILDING 315**

### **Facility Description**

Building 315 is near the intersection of D Street and 3rd Street. The building consists of a single-story structure of masonry block construction. A 100-kilowatt generator is housed inside Building 315. Diesel fuel is stored outdoors in a recently upgraded tank. The fuel is stored in a 500-gallon outdoor AST made of steel and encased in concrete. The tank is rectangular steel tanks with double-walled secondary containment. The pad-mounted AST supply diesel fuel to the emergency generator. The ground surface surrounding the building is unpaved.

### **Storage**

Diesel fuel is stored in one 500-gallon Convault Tank, Double walled tank. The tank has an exterior concrete vault for containment that is secured to a concrete pad. The fill port is the only access to the tanks. No high-level alarms exist on the tank, but it has a float high level indicator. The tank is painted for corrosion protection and is labeled with warning signs.

No hazardous substances are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST as needed. Fuel is transferred from a 1,500-gallon tank truck through the fill ports in the top of the tanks. Aboveground pipes connect the AST to the generator. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top off the fuel tank (as needed). There are no formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

## **Containment**

The AST is encased in concrete for secondary containment. The containment cell has no drain valve. Absorbent material exists on site.

## **Drainage**

The area outside the building is flat and unpaved. Runoff in the vicinity of the tank will flow east and north. Although canals are located on the west side of the site and in the vicinity of Building 315, the levee system eliminates the potential for impact.

## **Spill Prediction**

No spills should occur during filling of the 500-gallon diesel fuel AST. Tank leaks are not anticipated. Line leaks could flow to the ground surface or the floor of the building. The largest potential spill would result from the 1,500-gallon tank truck or hose. In this case, fuel would flow to the ground surface and migrate south.

## **Security**

This site is not fenced. The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF EI Centro. The Activity security patrols this area as part of their regular rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by both Brown & Root and occasionally by NAF EI Centro personnel.

## **Recommended Corrective Action**

1. Provide a spill kit for the AST.

## **6.26 WATER TREATMENT PLANT, BUILDING 333**

### **Facility Description**

NAF El Centro's water treatment plant is a fenced compound of several buildings situated in the southwest corner of the Activity at the west end of Valley Forge Avenue. Building 333 houses two transfer pumps, and a 110-gallon AST for diesel fuel storage for an emergency generator inside the building.

### **Storage**

Diesel fuel is stored in a 110-gallon AST on the floor of Building 333. There is no secondary containment. The tank is well maintained and adequately labeled.

### **Transfer**

Diesel fuel is transferred to the generator by an aboveground fuel line. Fuel is transferred to the AST using a 1,500-gallon tank truck, as needed. The generator is checked weekly and monthly by Brown & Root as part of their routine preventative maintenance inspection. Typical fuel transfers are on the order of twenty gallons.

### **Containment**

The diesel AST in Building 333 does not have secondary containment. In addition, no absorbent or spill kits are located in Building 333; however, absorbent is available from the Hazmat Department.

### **Drainage**

The area around Building 333 is relatively flat. Surface runoff would flow south. The area is unpaved and there are no drainage control features on-site.

## **Spill Prediction**

Spills associated with the diesel AST would flow to the floor of the building and likely migrate outside. Because of the volume of the tank, migration would be confined to the immediate vicinity of the building. The worst-case spill would result from a spill from the 1,500-gallon tank truck during servicing. The spilled material would flow to the ground surface and migrate toward Building 350, possibly entering the storm drain system.

## **Security**

The site is not manned on a regular schedule. The entire water treatment plant is enclosed by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. In addition, the entire Activity is fenced with access controlled by guards at the main gate.

## **Administration**

The civilian contractor, Brown & Root, is responsible for the operation and maintenance of the water treatment plant.

## **Recommended Corrective Action**

1. Provide a spill kit or absorbent for the fuel tank.
2. Ensure all significant materials are properly and clearly labeled.

## **6.27 WATER TREATMENT PLANT, BUILDING 350**

### **Facility Description**

NAF El Centro's water treatment plant is a fenced compound of several buildings situated in the southwest corner of the Activity at the western termination of Valley Forge Avenue. The building is a single-story structure constructed of masonry brick and plaster. A 1,600-gallon AST exists on the north side of the building that is used for sodium hypochlorite storage for Activity water treatment. The tank is constructed from fiberglass and is placed under a covered extension of the building, which is centrally located within the compound. Building 350 also houses a 100-watt generator with a 200-gallon diesel AST. The area surrounding Building 350 is relatively flat and is paved with asphalt.

### **Storage**

Liquid sodium hypochlorite is contained in a 1,600-gallon fiberglass tank. The tank is stored vertically on the concrete floor within a bermed secondary containment on the north side of Building 350. The tank is protected from direct exposure to the sun by the canopy that extends from Building 350. The tank is also bolted to the concrete floor.

Building 350 also houses a 100-watt generator with a 200-gallon diesel AST. The tank is an integral part of the generator.

A 55-gallon drum of flouride is stored in the flouride treatment room. The drum is stored on the concrete floor without secondary containment.

## **Transfer**

A contractor (Southern California Water Company) delivers liquid sodium hypochlorite to the 1,600-gallon tank at Building 350. The sodium hypochlorite supply is typically replenished monthly. Diesel fuel is delivered via 1,500-gallon tanker truck, as needed. Maytag performs this service.

## **Containment**

The sodium hypochlorite tank rests directly on a concrete pad. The tank is within a concrete bermed area and has adequate secondary containment.

The diesel AST is an integral part of the generator. However, it lacks secondary containment. The concrete pad to which the generator is secured provides no containment.

## **Drainage**

The area around Building 530 is relatively flat. Asphalt pavement surrounds the building. In general, the ground surface slopes away from the building on all sides. Over all drainage to east and south to the storm drain catchbasin.

## **Spill Prediction**

The maximum sodium hypochlorite spill would be the 1,600-gallon capacity. Diesel leaks from the tank or line would result in minimal impact as the ground surface is paved. The worst case spill would be 1,500-gallons from tanker truck failure, which could reach the storm drain catch basin south of Building 350.

## **Security**

The entire water treatment plant is enclosed by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. Security for the plant is the responsibility of the civilian contractor, Brown & Root and Southern California Water Company. The entire Activity is also fenced with a single access point. The main gate is manned 24 hours a day. Only authorized personnel are permitted access to NAF El Centro.

At Building 350, there are no “no smoking” signs evident. Emergency equipment consists of a fire extinguisher, an eyewash, and an emergency shower. Breathing equipment is not provided at this site.

## **Administration**

The civilian contractor, Southern California Water Company, is responsible for the operation and maintenance of the water treatment plant. The sodium hypochlorite tank is inspected on a daily basis by personnel trained to handle sodium hypochlorite.

## **Recommended Corrective Action**

1. Provide suitable respiratory protection for the sodium hypochlorite at site.

## **6.28 WATER TREATMENT PLANT, BUILDINGS 340 (STORAGE) AND 351 (TREATMENT MIXING)**

### **Facility Description**

Within the water treatment plant compound are a chemical storage warehouse (Building 340) and two aluminum sulfate and polymer mixing tanks located north of the water treatment unit, (Building 351). The storage warehouse is single-story wood frame building with a concrete floor. Access is provided by several wooden bay doors on the east side of the building. Drums and bags of bulk chemicals for water treatment are stored inside the warehouse. Building 351 consists of a large water treatment unit covered by a pole supported canopy roof. The treatment units rest on a concrete slab. To the north of the unit is a bermed (3-foot concrete wall) that contains two mixing tanks and caustic soda storage tank. Transfer pumps and associated aboveground piping are located in this containment area. The surrounding area is paved with asphalt.

### **Storage**

Aluminum sulfate and polymer are contained in two 500-gallon fiberglass tanks caustic soda is stored in a 5,000-gallon tank in this same area. All tanks sit on a concrete slab on top of a clear well. Tank access is provided via manways on top of the tank.

A number of chemicals are stored in the warehouse (Building 340). Approximately 10 cases of aluminum sulfate are stored on pallets on the floor of the warehouse. Two 55-gallon drums (metal) of flocculent also rest on pallets on the concrete floor. Drums of caustic soda (55-gallon plastic) and odor control chemical (1-gallon cans) are stored on pallets with secondary containment inside the warehouse. Approximately 300 pounds of calcium hypochlorite for emergency disinfection treatment at the water treatment plant. Finally, bags of diatomaceous earth are stacked on pallets in an orderly manner. In general, the warehouse is well maintained. All inventory is segregated and labeled as to the contents.

## **Transfer**

The caustic soda, aluminum sulfate and polymer are hand-carried from Building 340 to the tank area for mixing (Building 351). The mixing itself is performed either by hand or by an electric pump.

## **Containment**

Most storage and mixing areas have secondary containment. Secondary containment in the mixing area consists of a concrete wall that encompasses the tanks, pipes, and pumps. The cell is large enough to contain the contents of the 5,000-gallon tank. Most of the liquid inventory in Building 350 has secondary containment pallets or berms.

## **Drainage**

The pavement around the mixing tanks slopes away from the mixing tanks in all directions. No drainage control features exist in the area of the site. The ground surface around the warehouse slopes southeast.

## **Spill Prediction**

Minor spills in or near the warehouse would be limited to the immediate vicinity of the building.

The largest possible spill would be from a rupture of the 5,000-gallon caustic soda mixing tank. The spill would flow into the secondary containment cell without impact to the surrounding soils or storm water conveyances. The area in the vicinity of the tanks is flat and paved with asphalt.

## **Security**

The entire water treatment plant is enclosed by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. There are no additional security measures for the warehouse (Building 340) or for the mixing tanks at (Building 351). In addition, the entire Activity is fenced and access is controlled through the main gate. No unauthorized personnel are allowed access to NAF EI Centro.

## **Administration**

The civilian contractor, Southern California Water Company, is responsible for the operation and maintenance of the water treatment plant. The tanks are inspected twice daily by Southern California Water Company personnel.

## **Recommended Corrective Action**

1. No actions are necessary.

## **6.29 HOBBY SHOP, BUILDINGS 362**

### **Facility Description**

The NAF El Centro Hobby Shop, Building 362, is located east of D Street and south of 3rd Street. The building is a single-story building constructed of wood with a concrete foundation. The Hobby Shop consists of a welding shop, a car wash (Building 378), and a storage area. The building's paint booth is no longer in use.

The building is a single-story and is constructed of wood with a concrete floor. A protective canopy exists on the east side of the building that covers a concrete pad where materials are stored. The ground surface surrounding the building and car wash is paved with asphalt.

### **Storage**

Oil and hazardous substances are stored and used in Building 362. Oil is stored in 55-gallon drums on a secondary containment pallet in the central part of the building. Smaller quantities of lubricants, paints, detergents, and adhesives used at the Hobby Shop are stored in a flammable materials storage lockers (flammable lockers).

Hazardous wastes generated at Building 362 include waste fuel, used oil, oily rags, and used oil filters. These materials are collected in drip pans and buckets and consolidated in drums inside the building. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. The locker is fitted with fire suppression, lighting, and an exterior eye wash and fire extinguishers. The locker is also marked with caution signs. A propane tank is in the yard east of the building near the Hazwaste locker. The tank is on a metal stand in a fenced area. The tank is adequately labeled.

Finally, a detergent parts washer is located inside Building 362. The parts washer has an internal 5-gallon tank with secondary containment. The unit uses an aqueous detergent instead of solvents.

## **Transfer**

Daily- to weekly-use quantities of hazardous materials are delivered by the Brown & Root Hazmat Department (Building 519) for use at Building 362. Hazardous wastes are containerized for transfer to the Hazwaste locker each day. Hazardous waste may be accumulated in the locker for a maximum of 14 days. The Hazmat Department (Building 512) collects these wastes each week (Wednesdays), or they can be contacted as needed. All hazardous waste collected from Building 362 is transported by truck to the Hazardous Waste Compound (Building 530). An estimated 55-gallons of waste is transferred on a weekly basis.

## **Containment**

The flammable locker has a secondary containment cell in the bottom of the cabinet. This cell is capable of containing spills from small quantity containers stored inside the flammable locker. The Hazwaste locker located outside is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. These containment cells are large enough to contain the entire contents of at least one of the containers stored in the locker.

The detergent parts washer inside Building 362 is equipped with an internal containment compartment. A spill kit and absorbent are located inside the building near the flammable locker and the drums. Absorbent is also maintained in the shop area.

## **Drainage**

Within the building, the floors are flat and no floor drains exist. The yard area is equally flat with a slight slope to the south. A storm drain is located near the southwest corner of the building, however, impact from operations inside Building 362 are unlikely.

## **Spill Prediction**

Overturn, overfill, or rupture during delivery and/or transfer of the 55-gallon drum of hazardous substances outside the building would be the maximum expected spill. Spills occurring outside the building would flow onto the pavement or to the ground surrounding the building. Because of the volumes in question and the flat topography, the spilled material would not migrate far.

Indoor spills will usually amount to small quantities of oils or lubricants used for automobile maintenance. There are no floor drains within the building, and spills within the building should not reach outside areas.

One 55-gallon waste oil container inside the building is enclosed in secondary containment. Spills in this area would most probably occur during accessing the 55-gallon and would amount to minor spills (less than 55 gallons). Spill inside the flammable locker would be held in the internal containment compartment of the locker. Spills occurring outside the cabinet would flow onto the building's concrete floor.

The propane tank east of Building 362 poses more of a fire hazard than spill. Releases could occur during filling or leakage.

## **Security**

The site is not fenced. The propane tank is enclosed in a fence, and the Hazwaste locker is locked when not in use.

The Activity is secured with a perimeter fence. Activity access is through the main gate that is manned 24 hours a day. Activity security also patrols the area regularly.

## **Administration**

Operation and maintenance of the building and the detergent parts cleaner is the responsibility of Brown & Root. Hazardous material procurement and disposal is conducted through the NAF Hazmat Department.

## **Recommended Corrective Action**

1. Keep the Hazwaste locker locked when not in use because of the close proximity of Base housing.
2. Ensure all significant materials are properly and clearly labeled.

## **6.30 CAR WASH, BUILDING 378**

### **Facility Description**

The NAF El Centro Car Wash, Building 378, is located east of D Street and south of 3rd Street, on the southwest corner of Building 362. The building has a protective canopy extending over the car wash. The car wash pad is concrete, while the ground surrounding the facility is paved with asphalt. The car wash is designated for the use of washing Government and contractor vehicles, although privately-owned vehicles may use the facility. Sludge is collected from the drains that consist of an oil/water separator. A generator, pressure tank, and water tank are located on the east side of the wash bay on a concrete pad. A second concrete car wash pad is located next to the existing pad on the west side. The drain for this pad has been tapped into the existing car wash drain.

### **Storage**

Storage area consist of two oil/water separators and two high pressure water units.

### **Transfer**

Hazardous materials are procured from the Hazmat Center and delivered by truck to Building 378 by Brown & Root Hazmat Department. Hazardous wastes (sludges) collected from the drains are containerized for transfer to the Hazwaste locker at Building 362. These wastes are picked up by the Hazmat Department (Building 512) wastes are transported to the Hazardous Waste Compound (Building 530) for consolidation and disposal.

### **Containment**

The car wash is surrounded by a concrete curb. Rollover berms exist on the north and south sides for vehicle access. The 55-gallon drums are located inside this containment curbing on the concrete floor. The concrete floor is graded to drain to two sumps.

## **Drainage**

The entire wash pad is graded to drain to the two sumps. The perimeter curbing enhances drainage control. A storm drain is located immediately north of the car wash. In fact, it is likely that overspray and occasional runoff enter this drain.

## **Spill Prediction**

Spills of the 55-gallon drums inside the wash rack would be contained by the system. Spills and overspray occurring outside the car wash could flow onto the ground surrounding or into the storm drain.

Spills of sludge (during transport to the Hazwaste locker at Building 362) would flow to the ground surface. It is doubtful that a spill of this size would migrate very far from the source. Spills occurring inside the locker would be contained by the internal containment compartment.

## **Security**

The car wash is not fenced and it is accessible to all Activity personnel. The entire Activity is fenced, and the main gate is manned 24 hours a day. Activity security patrols the area as part of their rounds.

## **Administration**

Operation and maintenance of the facility is the responsibility of Brown & Root. Daily maintenance inspections of the tanks and drums are conducted by Brown & Root personnel.

### **Recommended Corrective Action**

1. Control spillage/overspray to the storm drain catchment basin located north of the wash bay. A rubber mat to cover this drain during car wash use is recommended.
2. Ensure all significant materials stored at the site are properly and clearly labeled.

## **6.31 GOVERNMENT VEHICLE SERVICE STATION, BUILDING 400**

### **Facility Description**

The Government Vehicle Service Station is located on North Street just west of B Street and it is used for Government and contractor vehicles. The station consists of a small, single-story building (typically unmanned), one pump island, concrete and asphalt drives, two ASTs in secondary containment, and a fueling port. The pump island is concrete and it contains two dispensing pumps and is covered by a steel canopy. Bollards are installed around fuel port and pump island to provide general protection from vehicle traffic. The ASTs are fenced. An earthen drainage ditch passes along the east side of the site.

### **Storage**

Two 10,000-gallon steel ASTs are located approximately 80 feet north of (behind) Building 400. The tanks are rectangular in shape and are oriented horizontally and side-by-side within a concrete secondary containment wall. The ASTs are used to store unleaded gasoline and diesel fuel. Access manways are located on the top of the tanks and level indicators and high level alarms provide limited overfill protection. The tanks are painted for corrosion protection and are adequately marked with warning signs.

There are no hazardous substances stored in Building 400.

### **Transfer**

The steel ASTs are filled by a commercial contractor. Approximately 15,000 gallons of gasoline and diesel fuel are transferred to the tanks quarterly. The fuel is transferred to the tanks from a remote fuel port on the concrete drive (within spill containment). The fuel ports are protected by bollards. For added spill protection during fuel delivery, the operator monitors the quantity transferred on the delivery meter. Underground pipes extend between the fuel port and the ASTs, and from the ASTs to the pump island.

These underground fuel lines have vapor monitoring leak detection, according to Brown & Root personnel. For safety, an emergency shutoff switch is located on the front (south side) of the building.

### **Containment**

The two 10,000-gallon double walled storage tanks at the Government Vehicle Service Station are provided with secondary containment in the form of a perimeter concrete wall. The containment cell is fitted with a locked valve for drainage control. The cell will contain up to 110 percent of one tank's volume. The concrete drive area, which includes the pump island and the fuel ports has insufficient secondary containment for a tanker truck. This containment system consists of curbing on the north and south sides of the drive. Rollover berms are located across the east and west sides of the concrete drive to complete the containment. Two catchment basins exist within the curbing on the north side of the site for collecting spilled fluids and storm water. A closed valve provides storm water drain protection. In addition, absorbent material is located onsite adjacent to the building.

### **Drainage**

The area around the building is relatively flat. The unpaved area in the rear of this building slopes toward the drainage ditch approximately 100 to 200 feet to the east of the building. The concrete pavement in front of the building is sloped north, away from North Street and toward the catchment basins.

Runoff from the gas station will be contained in the bermed area and enter valved catchment basins. The collected fluids must be inspected or analyzed for contaminants prior to release. Liquid is released to the storm drain, as appropriate.

## **Spill Prediction**

Fuel spills at the Government Vehicle Service Station could occur from overfilling of the ASTs, transfer hose rupture, piping failures, and vehicle fueling activities. Spills could also occur upon failure of the tank truck vessel. The largest filling spill possible would occur from a 5,000 to 8,000-gallon tank truck. Filling spills or tank leaks would likely be contained within the secondary containment. A spill associated with the tanker truck, vehicle fueling, or fuel port facilities would flow to the concrete and migrate towards the catchment sumps. It is unlikely that any spill at this site would impact the drainage ditch to the east of the site.

## **Security**

The fueling pumps are located on an island and protected to some degree by bollards. Pump operation is accessed by a key card that is swiped to activate the pumps. Two overhead lights, one over each pump, at the dispensing station provide sufficient illumination. The tanks are inside a chain link fence. Security personnel perform after-hours patrol at this service station as part of their regular rounds, as well as provide restricted access to NAF El Centro through the main gate.

## **Administration**

Operation and maintenance of the Government Vehicle Service Station is the responsibility of Maytag.

## **Recommended Corrective Action**

1. Perform and document inspections according to standard operating procedures and checklists provided in Annex 2. Provide the results of these evaluations to Public Works Department-Environmental Division.
2. Ensure the drain valve is secured.

## **6.32 EMERGENCY GENERATOR, BUILDING 433**

### **Facility Description**

Building 433 is southeast of the Enlisted Dining Facility (Building 436) and it houses a 100-kilowatt generator. Diesel fuel is stored outdoors in a 100-gallon steel AST with secondary containment. The building is located in a landscaped area.

### **Storage**

There is no hazardous substance storage inside Building 433. However, diesel fuel is stored outdoors in a 100-gallon steel AST within a metal secondary containment cell. The containment has a valve for drainage. The tank is protected from vehicle damage by bollards. The tank is painted for corrosion protection and labeled with appropriate caution signs.

### **Transfer**

Fuel is supplied to the generator by 1-inch diameter aboveground lines. The fuel storage tank is filled from the top by a 1,500-gallon tanker truck. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. Maytag is contacted to top off the tank is (as needed) during these inspections. Typical fuel transfers are less than twenty gallons.

### **Containment**

The metal secondary containment cell for the AST has the capacity to contain the entire contents of the tank. Absorbent material is not available in this building, but it can be provided by the Hazmat Department as needed. Fuel tankers are also equipped with absorbent material.

## **Drainage**

The area outside the building is flat and unpaved (grass-covered). There is a slight slope to the northwest toward the asphalt pavement.

## **Spill Prediction**

Minor spills may occur during filling of the 100-gallon diesel AST. These spills and line leaks at the tank will be contained by the secondary containment cell. Other line leaks would flow to the ground surface or to the floor of the building. The largest potential leak would result from the 1,500-gallon tank truck or hose during servicing. In this case, spill would flow to the asphalt and possibly migrate to the storm drain system.

## **Security**

The site is not fenced, but the building that houses the generator is locked. The Activity is surrounded by a perimeter fence, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the tanks are conducted and documented by Brown & Root and on occasion by NAF El Centro personnel.

## **Recommended Corrective Action**

1. Provide absorbent in Building 433.

### **6.33 ENLISTED DINING FACILITY - EMERGENCY GENERATOR, BUILDING 436**

#### **Facility Description**

Building 436, the enlisted dining facility, is situated in the center of the area bounded by North, South, East, and West Streets. This building was formerly supported by a diesel-powered emergency generator, but was converted to natural gas. The facility, however, still maintains chemicals in the boiler room. The boiler room is recessed 6-inches below the ground surface and has a concrete floor.

#### **Storage**

Four 55-gallon drums of boiler treatment chemicals, including corrosion inhibitor, water treatment, and descalant, are located in the boiler room. The drums are clearly labeled, but do not have secondary containment. The drums are stored on a concrete floor that is recessed 6-inches below the surrounding floors.

#### **Transfer**

Boiler chemicals are procured and received through the Hazmat Department (Building 512). Deliveries are made by truck and transferred to the boiler room on a drum dolly. No waste is generated by the boiler, and only empty drums are removed by the Hazmat Department as needed.

#### **Containment**

There is no secondary containment for chemicals in the boiler room. The drums are placed directly on the concrete floor. Absorbent material is not provided on-site.

## **Drainage**

The area outside the building is flat and paved (except for the grassy area on the south end of the building). Surface runoff migrates to the east toward East Street.

## **Spill Prediction**

Spills may also occur from leaking drums and during transfer of boiler chemicals. Spills would flow to the concrete floor and probably be contained inside the building. Outdoor spills would likely be confined to a small area with minimal, if any, offsite impact.

## **Security**

The exterior door to the boiler room is locked. Access to the Activity is restricted to authorized personnel. Security personnel patrol this area as part of their regular rounds.

## **Administration**

The building is operated by NAF personnel. Building maintenance is performed by Brown & Root.

## **Recommended Corrective Action**

1. Provide adequate secondary containment for all water treatment chemicals in the boiler room. A containment pallet is recommended.
2. Reduce quantities of significant materials stored, if possible. Daily use quantities are recommended.
3. Provide absorbent materials for the boiler room.

## **6.34 SEWAGE LIFT STATION - EMERGENCY GENERATOR, BUILDING 446**

### **Facility Description**

Building 446 is located on the south side of 4th Street and west of B Street. Diesel fuel is stored outdoors in a 110-gallon, single-walled, steel aboveground storage tank with secondary containment. The tank is located at the southwest corner of the building and is protected from damage by vehicles by bollards.

### **Storage**

There is no oil or hazardous substances stored inside Building 446. However, diesel fuel is stored outdoors in a 110-gallon steel AST at the southwest corner of the building. The AST is covered, has secondary containment, is painted for corrosion protection, and is adequately marked with caution signs. No high-level alarm exists in the tank.

### **Transfer**

The generator receives fuel from the AST through aboveground lines. The fuel storage tank is filled from a 1,500-gallon tanker truck. Maytag is contacted to top off the tank (as needed) as part of the weekly and monthly preventative maintenance inspections. There are no formal procedures for inventory control.

### **Containment**

The AST has a metal secondary containment cell that can contain the contents of the tank. The containment cell has a locked drainage valve. Absorbent material is not available in this building, but can be provided by the Hazmat Department as needed. Fuel tankers are also equipped with absorbent material.

## **Drainage**

The area outside the building is flat and paved. Runoff flows east to the drainage ditch that parallels A Street, and flows north. There are no drainage controls in place at the site.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. These leaks near the tank will be contained by the secondary containment cell. Other line leaks will flow to the ground surface or to the floor of the building. The largest potential spill would be from the 1,500-gallon tank truck during servicing. In this case, fuel would flow to the drainage ditch on the east side of the and potentially migrate to an outfall.

## **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. The emergency generator building is kept locked, and the Activity security patrols the area as part of their rounds. The site is not fenced.

## **Administration**

Brown & Root maintains and operates the emergency generators, refueling is done by Maytag. Weekly and monthly preventative maintenance inspections of the generator and tanks are conducted and documented by Brown & Root and on occasion by NAF El Centro personnel.

## **Recommended Corrective Action**

1. Provide absorbent materials to Building 446.
2. Ensure the drain valve is secured.
3. Post warning signs or systems to prevent early departure of tanker trucks.

## **6.35 EMERGENCY GENERATOR FUEL STORAGE, BUILDING 459**

### **Facility Description**

Building 459 is a single-story, masonry block building on the north side of 4th Street, west of D Street. Diesel fuel is stored in a 200-gallon, rectangular aboveground steel storage tank, in the west room of the building (Figure 42; Annex 1). The room is completely bermed at the entrance doorway.

### **Storage**

There is no hazardous substance other than diesel fuel inside Building 459. Diesel fuel is stored in a 200-gallon steel AST in the west room of the building. The tank is in good repair, and is adequately labeled. The building is also labeled with warning signs.

### **Transfer**

The fuel storage tank is filled from the 1,500-gallon tank truck. The tank is topped off as part of the weekly and monthly preventative maintenance inspection. There are no other formal procedures for inventory control.

### **Containment**

Secondary containment for the 200-gallon steel AST at Building 459, consists of a concrete berm across the doorway. The containment area will contain the contents of the tank. Absorbent material is not available in this building, but can be provided by the Hazmat Department as needed. Fuel tankers also have absorbent material when filling the AST.

## **Drainage**

The area outside the building is flat and unpaved. Runoff flows north toward the airfield.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank, or from tank or line leaks. These minor spills are not likely to reach the outside because of the bermed containment.

Major spills resulting from tank truck leaks/spills may flow into the drainage ditch to the north or to the sewer manway on the west side of Building 459.

## **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF EI Centro. The emergency generator is locked, and the Activity security patrols the area as part of their rounds. Adequate lighting is available inside this building.

## **Administration**

Brown & Root maintains and operates the emergency generators, refueling is done by Maytag. Weekly and monthly preventative maintenance inspections of the generators and tanks are conducted and documented by Brown & Root and on occasion by NAF EI Centro personnel.

## **Recommended Corrective Action**

1. Provide absorbent material inside this building.
2. Caution should be taken when entering this building, because leaked fuel could create toxic environment. Warning signs should be posted on door.

## **6.36 HAZMAT RECYCLING BUILDING 484**

### **Facility Description**

The Hazmat Department uses Building 484 located along D Street south of 4th Street. Because this practice has changed, this facility is no longer included in the SPCC program. Due to the storage of recycling material, this site will stay in the SPCC.

## **6.37 EMERGENCY GENERATOR FUEL STORAGE, BUILDING 490**

### **Facility Description**

Building 490 is located near the intersection of D Street and 3rd Street (Figure 44; Annex 1). A 35-kilowatt generator and a 200-gallon diesel fuel AST are housed inside Building 490. The tank is a rectangular steel tank with no secondary containment. The building is a single-story masonry block structure with one entrance. The area surrounding the building is unpaved.

### **Storage**

There is no hazardous substance other than diesel fuel inside Building 490. Diesel fuel is stored in a 200-gallon steel AST in the building. There is no secondary containment around the tank. The fill port of this tank is located on top of the tank. The tank is labeled and is in good condition. Adequate warning signs are placed throughout the building.

### **Transfer**

Fuel is transferred to the generator by an aboveground fuel line. The fuel storage tank is topped off from the 1,500-gallon tank truck, as needed, during routine maintenance inspections. There are no formal procedures to document inventory control.

### **Containment**

There is no secondary containment for the diesel aboveground fuel tank at Building 490. No absorbent material is stored on-site, but it is available from the Hazmat Department as needed. Fuel tankers also have absorbent material on-hand when filling fuel tank.

## **Drainage**

The area outside the building is flat and unpaved. The concrete floor is also flat. The area surrounding the building drains northeast, away from 3rd Street. There are no sanitary sewer manholes or storm drains in the vicinity of Building 490.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. These spills and leakage from the tank, fuel lines, or generator would flow to the floor of the building, and depending on the volume could migrate outside under the door. The largest potential spill would be a release from the 1,500-gallon tank truck during routine servicing. In this case, fuel would flow to the soil.

## **Security**

The fuel tank and generator are housed within a locked building. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols this area as part of their rounds. Adequate lighting is available inside the building.

## **Administration**

The generator and AST are checked and operated weekly and monthly as part of the routine preventative maintenance inspections. Fuel is topped-off as needed during the inspections. Brown & Root conducts and documents these inspections. Maytag provides the fueling services.

## **Recommended Corrective Action**

1. Provide adequate secondary containment for the AST. Options include a containment cell around the tank or a berm across the entrance door.
2. Provide absorbent material inside the building.
3. Replace rubber hose with rigid lines.

## **6.38 EMERGENCY GENERATOR FUEL STORAGE, BUILDING 492**

### **Facility Description**

Building 492 is located on the northwestern portion of the air field, north of Runway 26 R and south of Building 493. The building is a single-story, masonry block structure that houses a generator for radar equipment. Diesel fuel is stored in a 100-gallon AST horizontally mounted on steel posts. Tank stability is questionable. A pad-mounted transformer exists south of the building near the AST.

### **Storage**

There is no hazardous substance inside Building 492. Diesel fuel is stored in a 100-gallon AST that is horizontally mounted on steel posts approximately three feet off the ground. The stand lacks stability and no protective bollards exist. The tank is painted for corrosion protection and is adequately labeled. There is a concrete secondary containment berm underneath the tank. In addition, a pad-mounted transformer exists to the south of the building.

The transformer reportedly contains non-PCB dielectric fluid. There is no secondary containment, but the transformer is fenced.

### **Transfer**

Fuel is transferred to the generator by an aboveground fuel line. Maytag tops off the fuel storage tank from a 1,500-gallon tank truck, as needed, during routine maintenance inspections. Average fuel transfers are on the order of twenty gallons. There are no formal procedures for inventory control.

## **Containment**

The AST at Building 492 is over a concrete secondary containment berm that is adequate to contain the volume of the tank in the event of a leak. However, the bermed area will probably not contain a spill should the tank overturn. No absorbent material is located at this site, but it is available from the Hazmat Department, as needed. Fuel tankers also have absorbent material when filling fuel tank. Supports are unstable and inadequate, no drain valve on containment.

The transformer does not have secondary containment.

## **Drainage**

The area outside the building is flat mostly unpaved. An asphalt driveway accessing the building is located to the north. The ground surface slopes to the north and west. There are no drainage features or controls in the vicinity of the site.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. These spills/leaks near the tank will be contained by the concrete berm containment. Other line leaks will flow to the soils or the floor of the building, depending on the location of the leak. The largest spill potential would be from the 1,500-gallon tank truck during servicing. A spill of this nature would flow to the surface soils and migrate north and west, but it is not anticipated to affect sanitary or storm sewers. Leaks associated with the transformer would flow to the surface soils. It is unlikely that leaked oils would migrate very far from the transformer.

## **Security**

This is a remote site on the airfield. The site is not fenced, but the building is locked. In addition, the entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols the area as part of their rounds.

## **Administration**

The generator is checked and operated weekly and monthly as part of the routine preventative maintenance inspections. Brown & Root conducts and documents these inspections. Maytag provides the fueling services.

## **Recommended Corrective Action**

1. Ensure the tank is safe from overturning, and install bollards to protect from vehicle traffic.
2. Provide absorbent material inside Building 492.
3. Replace tank with a double walled tank.

## **6.39 HANGAR 7, BUILDING 502**

### **Facility Description**

Maintenance Hangar 7 is located north of 9th Street, south of Taxiway D. Building 502 consists of an aircraft maintenance hangar and an associated hazardous waste accumulation area. The building is a one-story hangar constructed primarily of wood. The hangar has a concrete floor and concrete pavement surrounds the building. Repair and maintenance of aircraft is conducted within the hangar and on the adjacent apron. Aircraft ground support and maintenance equipment is housed within the hangar.

A hazardous waste locker (Hazwaste locker) is associated with this building and is located against the perimeter flight apron containment curb at the southwest corner of the building.

### **Storage**

Small (daily-use) quantities of flammable materials, paints, oil, and grease are commonly used and stored inside the hangar. These products are stored in a flammable materials storage (flammable locker) inside the hangar. Typically, the total quantity of these products stored on site is less than 20 gallons.

Maintenance activities typically generate large quantities of waste liquids such as used oil, hydraulic fluid, lubricant, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities and are transferred to and consolidated in 55-gallon drums stored in the outdoor Hazwaste locker. Solid hazardous wastes such as drained oil filters, oily rags, and used absorbent are also collected in 55-gallon drums stored in this locker. The Hazwaste locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression, interior lighting, and exterior eye wash and fire extinguishers. The locker is also marked with cautionary signs. Hazardous waste containers are placed on a

rack-type floor over secondary containment inside the locker. All drums are labeled and grounded.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

## **Transfer**

Waste materials generated inside the hangar are collected in 2 to 5-gallon containers and transferred to the Hazwaste locker daily.

Hazardous waste accumulation may be stored inside the Hazwaste locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesdays) or they can be contacted as-needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated weekly.

New chemical products required for maintenance activities are procured from Hazmat on a daily basis. Only daily-use quantities are distributed. Chemical products are transported by vehicle to the hangar.

## **Containment**

The flammable locker has a secondary containment cell in the bottom of the cabinet. This cell is capable of containing spills from the small-quantity containers stored inside the cabinet. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to hold the entire contents of at least one of the containers stored in the locker.

Spill kits or absorbent are sometimes stored inside the hangar near the flammable locker (depending on the squadron using the hangar) and are permanently placed inside one compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate typically small-scale spills.

Containment curbing for the flight apron abuts the south end of the hangar. On the east side of the hangar, a rollover berm exists to allow vehicle traffic access to the hangar and flight apron. On the west side, a catchment basin exists in the curbing. The catchment basin is fitted with a valve (downstream) that is closed to protect flow to the storm drain.

### **Drainage**

The concrete flight apron in the vicinity of Building 502 slopes toward the low area at the south end of the building. Runoff in the vicinity of the hangar would flow south and be contained by the concrete containment curbing and valved catchment basin system that surrounds the flight apron. Any liquid collected in the catchment basin is inspected by the Environmental Division personnel before it is released or pumped out (Figure 4). The floor of the hangar is flat. Small spills to the floor would pool on the concrete floor. It is unlikely that small quantities of hazardous materials used inside the building would migrate outside of the building in the event of a spill.

### **Spill Prediction**

Indoor spills will usually amount to small quantities of oils that would be contained in the flammable locker, or flow to the concrete floor of the hangar. In the unlikely event that a spill inside the hangar migrates outside, it would be contained by the containment curbing. Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment curbing that prevents all spills from entering the drainage swale to the south. The entire

contents of the drum would be contained by the curb and catchment basin system. Cleanup could be accomplished using on-site materials.

There is negligible spill potential to the sanitary sewer system, as described above.

### **Security**

Building 502 is located within the flight line fencing, and the Activity security regularly patrols the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

### **Administration**

Brown & Root Transient Line operations schedule the use of Building 502. This hangar is used by transient squadrons while training at the Activity. Hazmat is responsible for coordinating all product and waste distributed to and collected from the building.

### **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this building.
2. Conduct SPCC procedures review for all squadron Hazmat coordinators.

## **6.40 HANGAR 8, BUILDING 503**

### **Facility Description**

Maintenance Hangar 8 is north of 9th Street, south of the middle of Taxiway D. Building 503 consists of an aircraft maintenance hangar and an associated hazardous waste accumulation area. The hangar has a concrete floor and concrete pavement surrounds the building. The hangar is occupied by transient squadrons training at NAF El Centro. Aircraft repair and maintenance are conducted within the hangar and on the apron area surrounding the hangar. Aircraft fueling is conducted on the apron around Hangar 8. Equipment housed within the hangar includes aircraft, aircraft ground support, and maintenance equipment.

One hazardous waste locker is associated with this building. They are located near the southeast corner of the building.

### **Storage**

Small (daily-use) quantities of hydraulic fluid, paint, detergent, and lubricating oil are commonly used and stored inside the hangar. These products are stored in two flammable material storage lockers (flammable lockers) inside the hangar. Typically, the total quantity of these products stored on-site is less than 20 gallons.

Maintenance activities performed in the hangar typically generate large quantities of waste liquids such as hydraulic fluid, oil, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities. These wastes are consolidated in 55-gallon drums stored in the outdoor Hazwaste locker. The locker is metal, self-contained, walk-in storage units that lock. They are fitted with fire suppression, interior lighting, and exterior eye wash and fire extinguishers. The Hazwaste locker is also well marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker. The waste drums are labeled and grounded.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

## **Transfer**

Waste materials generated inside the hangar are collected in 2 to 5-gallon containers and transferred to the Hazwaste locker daily.

Hazardous waste accumulation is stored inside the Hazwaste locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesday), or they can be contacted as needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated on a weekly basis.

New chemical products required for maintenance activities are procured from Hazmat daily. Only daily use quantities are distributed. Chemical products are transported by vehicle to the hangar.

## **Containment**

The flammable lockers have a secondary containment cell in the bottom of the cabinet. This cell can contain spills from small-quantity containers stored inside the cabinet. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to hold the entire contents of at least one of the containers stored in the locker.

Spill kits or absorbent are sometimes stored inside the building near the flammable lockers (depending on the squadron using the hangar) and permanently stored inside

the one compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate typically small-scale spills.

Containment curbing for the flight apron abuts the south end of the hangar. On the east side of the hangar, a rollover berm exists to allow vehicle traffic access to the hangar and flight apron. On the east and west sides, catchment basins exist in the curbing. The catchment basins are fitted with a valve (downstream) that is closed to protect discharge to the blind sump. These catchment basins are not connected to the storm drain.

### **Drainage**

The concrete flight apron in the vicinity of Building 503 slopes toward the low area at the south end of the building. Runoff in the vicinity of the hangar would flow south and be contained by the concrete containment curbing and valved catchment basin system that surrounds the flight apron. Any liquid collected in the catchment basin is inspected by Environmental Division personnel before it is released or pumped out (Figure 4).

The floor of the hangar is flat. Small spills to the floor would pool on the concrete floor. It is unlikely that small quantities of hazardous materials used inside the building would migrate outside in the event of a spill.

### **Spill Prediction**

Indoor spills will usually amount to small quantities of oils or cleaning solvents that would be contained in the flammable lockers, or flow to the concrete floor of the hangar. In the unlikely event that a spill inside the hangar would migrate outside, it would be contained by the concrete curbing.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment curbing.

However, the entire contents of the drum would be contained by the curb and catchment basin. Cleanup could be accomplished using on-site materials.

### **Security**

Building 503 is located within the flight line fencing, and Activity security regularly patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

### **Administration**

Brown & Root Transient Line operations schedule the use of Building 503. This hangar is used by transient squadrons while training at the Activity. Hazmat is responsible for coordinating all product and waste distributed to and collected from the building.

### **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this building.
2. Conduct SPCC procedures review for all squadron Hazmat coordinators.

## **6.41 HANGAR 9, BUILDING 505**

### **Facility Description**

Maintenance Hangar 9 is located north of A Street, south of the east end of Taxiway D. Building 505 consists of an aircraft maintenance hangar, an associated hazardous materials accumulation area (Figure 48; Annex 1). The building is a one-story hangar constructed of wood with a metal beam framework. The hangar has a concrete floor and concrete pavement surrounds the building. Aircraft repair and maintenance are conducted within the hangar and on the apron area surrounding the hangar.

A Hazwaste locker is associated with this building and is located near the perimeter curb at the southwest corner of the building.

### **Storage**

Small (daily-use) quantities of flammable materials, paints, and oils are commonly used and stored inside the hangar. These products are stored in several flammable lockers inside the hangar. All materials are clearly labeled. Typically, the total quantity of these products stored on site is less than 30 gallons.

Maintenance activities performed in the hangar typically generate large quantities of waste liquids such as turbine oil, drained oil containers, and aviation fuel (JP-5). These wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities. The wastes are consolidated in 55-gallon drums stored in the outdoor Hazwaste locker. The locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression, interior lighting, and exterior eye wash and fire extinguishers. The locker is also marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker. The waste drums are labeled and grounded.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

Aircraft fueling trucks are regularly parked outdoors on the west and south side of the hangar. Trucks parked on the south side of the hangar are outside the perimeter containment curb and are in a storm water conveyance swale (Ninth Street).

### **Transfer**

Waste materials generated inside the hangar are collected in 5 to 15-gallon buckets and drums and transferred to the Hazwaste locker daily.

Hazardous waste accumulation is stored inside the locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to dispose of drums once they are full. Hazmat (Building 512) collects these wastes each week (Wednesdays), or they can be contacted as needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 50 gallons of waste is generated weekly.

New chemical products required for maintenance activities are procured from Hazmat daily. Only daily use quantities are distributed. Chemical products are transported by vehicle to the hangar.

### **Containment**

The flammable locker has a secondary containment cell in the bottom of the cabinet. This cell is capable of containing spills from small quantity containers stored inside the cabinet. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to hold the entire contents of at least one of the containers stored in the locker.

Spill kits are also stored inside the building near the flammable locker and inside the one compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate typically small-scale spills.

Containment curbing for the flight apron abuts the south end of the hangar. The curbing ends on the east side of the hangar, and several damaged sections of curb were noted. On the west side of the hangar, the curbing is constructed with a rollover berm to allow vehicles access to the hangar and flight apron, and catchment basin. The catchment basin is fitted with a valve (downslope) that is closed to protect against unwanted releases.

### **Drainage**

The concrete flight apron in the vicinity of Building 505 slopes to the south toward the building. Runoff in the vicinity of the hangar would flow south and be contained by the concrete curbing and valved catchment basin system on the west side of the hangar, but pass to the drainage swale (9th Street) on the east side of the hangar. Any liquid collected in the catchment basin is inspected by Environmental Division personnel before it is released or pumped out (Figure 4). These sumps are not connected to the storm water drain.

The floor of the hangar is flat and there are no floor drains within the building. Small spills to the floor would pool on the concrete floor. It is unlikely that small quantities of hazardous materials used inside the building would migrate outside in the event of a spill.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of oils that would be contained in the flammable locker, or flow to the concrete floor of the hangar. In the unlikely event that a spill inside the hangar would migrate outside, it would be contained by the curbing on the west, and only partially contained by curbing on the east.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum. The spill would flow to the concrete, and migrate toward the concrete containment curbing. However, the entire contents of the drum would be contained by the curb and catchment basin. Cleanup could be accomplished using on-site materials.

## **Security**

Building 505 is located within the flight line fencing, and Activity security regularly patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Maytag and Raytheon each use one side of the hangar. Brown & Root performs building maintenance. Hazmat is responsible for coordinating all product and waste distributed to and collected from the building.

### **Recommended Corrective Action**

1. Loaded fuel trucks should only park west of Hangar 9 inside the flight line containment curb. Not to the east or south of the building.
2. Fueling, aircraft parking, and maintenance operations should not be performed east of Hangar 9, because of the lack of containment curbing.
3. Repair damaged curbing.

## **6.42 BLAST, AND PAINT SHOP, BUILDING 508**

### **Facility Description**

Building 508 is one of a series of buildings operated by Dyncorp and is located west and north of the intersection of 9th and E Streets.

The building is a single-story, constructed of wood, and has a concrete floor. The building houses a metal shop, painting area, and a Hydro-Blast (pressure washer) system. A media blaster and two flammable material storage lockers flammable lockers are located in the southern portion of the building. A paint booth makes up the northwest portion of the building. One paint gun cleaning and one flammable locker are located in this area. An additional paint booth has been added to the building in the northeast corner. A small detached paint booth and mobile showers exist on the northeast side of the building.

The area around the building is paved and equipment is stored in the paved yard area west of the building.

Also on the west side of the building, an aqueous detergent parts washer and a Hydro Blast wash rack exist.

### **Storage**

Small (daily-use) and large quantities of hazardous materials and waste are used and stored at this site. The three metal flammable lockers exist in this building. Two of the lockers are used to store small quantities of lubricants, paint, and adhesives. The lockers are very orderly and the contents are clearly labeled. Less than 5 gallons total of product is stored in these flammable lockers.

The flammable locker in the painting area stores a variety of small-quantity paints. The total quantity of paint stored is approximately 30 gallons. All cans are orderly and clearly labeled.

The paint gun cleaning sink uses a petroleum-based thinner to clean the paint guns. A five-gallon container of thinner is located inside the recirculating sink, inside secondary containment. The cleaner is a Safety-Kleen product.

One 55-gallon drum of hydrogen peroxide and detergent are stored in the Hydro Blast area. The drums are marked and placed within the sloped wash pad. The pad slopes to a central drain/separator. The Hydro Blast is a closed-loop recirculating system.

The parts washer uses hot water and detergent that is contained internally within the unit. Approximately 10 gallons of solution is contained in the reservoir, which is also a recirculating system.

Building 508 is a hazardous waste accumulation area for all Dyncorp operations. Wastes consisting of oils, fuels, paints, media blast, sludge, detergent, and rags are consolidated into one Hazwaste locker southwest of Building 508. The Hazwaste locker is metal, walk-in storage units that lock. It is fitted with fire suppression, lighting, and an exterior eye wash and fire extinguishers. The locker is marked with cautionary signs. Drums are placed on a rack-type floor over secondary containment inside the locker. The waste drums are labeled and grounded.

## **Transfer**

Hazardous materials are brought to Building 508 on delivery trucks and unloaded on the east and west sides of the building. Waste materials generated at all Dyncorp operations are brought to Building 508 daily for consolidation and storage prior to disposal. Wastes are consolidated into 55-gallon drums inside the Hazwaste lockers. The waste is stored for a maximum of 14 days. The Hazmat Department provides the collection each week (Wednesdays), or sooner if needed. All wastes are transported to NAF El Centro Final SPCC

the Hazardous Waste Compound (Building 530) by truck. Quantities of waste generated vary from one to three 55-gallon drums each week.

### **Containment**

The flammable lockers are equipped with internal containment in the base of the cabinet that provides sufficient capacity in the event of a spill from the small quantity container within the cabinet. Absorbent is provided in the building and the west yard area.

Thinner used in the recirculating sink drains into a 5-gallon container inside a containment pan internal to the unit. A similar design is used by the detergent parts washer.

The Hazwaste locker has internal containment of approximately 175 gallons, which is adequate for the materials stored. Finally, the Hydro Blast wash rack is sloped to a central drain/separator where sludge is collected and the water is recirculated through the system.

### **Drainage**

The floor of the buildings are relatively flat and spilled liquids are not expected to migrate far. The yard is sloped to the north on the east side of the building and toward a storm drain in the central portion of the yard on the west side of the building.

### **Spill Prediction**

Spills inside the storage flammable lockers would be held within the internal containment compartments. Spills occurring outside the lockers would flow onto the floor of the building. Significant spills and/or any spill occurring near the doorways may flow outside the building onto the surrounding pavement. Spill incidents could occur during delivery and handling of the paint pails and thinners to and from the building, with the maximum expected spill to be one of the 5-gallon pails of paint or thinner. Spills inside the Hazwaste locker would be held within the internal containment compartments

of the lockers. Spills occurring outside the lockers, would flow onto asphalt pavement and possibly reach 8th Street or the storm drain catchbasin in the yard.

### **Security**

Building 508 is secured by a chain-link fence. Access is controlled by two gates. Hazardous material warning signs are posted in the building, as are no smoking signs. The Hazwaste locker and flammable lockers are locked when not in use.

### **Administration**

Dyncorp, an NAF El Centro tenant, operates the building and maintains strict control of all hazardous materials and waste. Maintenance of the paint gun cleaning sink is provided by Safety-Kleen Corporation. The Hazmat Department provides procurement and disposal of all hazardous substances and waste.

### **Recommended Corrective Action**

1. Provide secondary containment for the outside flammable lockers.

## **6.43 SUPPLY STORAGE, BUILDING 509**

### **Facility Description**

Building 509 is located to the west of Building 508, and south of 9th Street and Hangar 9. The building is used for excess SPCC equipment. Outside the building, drums of hydraulic fluids and lubrication oils and bags of media blast are stored. All exterior storage areas are covered by a canopy.

### **Storage**

There is no oil or hazardous material storage inside Building 509.

A drum rack and portable lubricating rack which stores 55- and 35-gallon drums is located on the south side of the building. Finally, 100+ bags of media blast are stored on pallets on the west side of the building. All materials are clearly labeled and properly stored.

### **Transfer**

The containers of hydraulic fluid and oil are delivered to Building 509 via trucks or forklifts and distributed to point of use either by hand delivery or by vehicle.

### **Containment**

Secondary containment including safety storage drum pallets, metal containment pans, and drip pans, is provided for oil and hydraulic fluid storage. The secondary containment system is matched with the container, and all types of containment are adequate.

## **Drainage**

The paved area surrounding the building where materials are stored slopes south toward the west yard area of Building 508. Runoff flows to the storm water drain in that yard area.

## **Spill Prediction**

Drum leaks would be contained by the secondary containment systems that are currently in place. Spill incidents could occur during delivery and handling of hydraulic fluid and oil with the maximum expected spill to be one of the 55-gallon drums. Spills outside of the secondary containment systems would flow to the asphalt pavement then south toward the storm drain in the west yard of Building 508.

## **Security**

This building is between the flight line fence to the north and the fence along 8th Street. The building is locked, but all the significant products are stored outside. The entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF EI Centro.

## **Administration**

Hazmat operates the building and Brown & Root provides the building maintenance services.

## **Recommended Corrective Action**

1. No actions required.

## **6.44 HAZARDOUS MATERIAL SUPPLY, BUILDING 512**

### **Facility Description**

NAF El Centro maintains a centralized hazardous materials distribution system housed in Building 512. Building 512 is located in the east corner of the intersection of G and 8th Streets, due east of Building 528. Quantities of hazardous materials are stored inside this building and the associated Hazmat storage lockers north of the building.

The building is constructed of a wood frame and stucco exterior. The floor is concrete and a chain-link fence secures the site on the north and south sides.

### **Storage**

The Hazardous Materials Supply Building stocks a diversified inventory of flammable, corrosive, toxic, as well as non-hazardous chemicals and products for Activity distribution. Large quantities (more than 100 gallons) of primarily oils, greases, paints, lubricants, adhesives, sealants, and cleaners (detergents and solvents) are stored inside the building and outside (to the north) in nine Hazmat storage lockers. A site-specific inventory of materials is presented in Annex 7.

Hazardous materials are stored in flammable lockers, on shelves and racks inside the building. Material storage in the Hazmat lockers are on shelves and rack-type floor over secondary containment. All materials are well marked. Adequate warning signs are posted around the building and the storage lockers. Computerized tracking of distribution is conducted by Hazmat personnel.

### **Transfer**

Hazardous materials are acquired by Activity personnel and transient squadrons at NAF El Centro at Building 512. Hazmat personnel maintain current inventories of the materials at Building 512 (and the lockers) and reorder stock on a demand basis.

## **Containment**

Several racks of hazardous materials inside the building do not have containment. Other items are stored in flammable lockers with internal secondary containment. However, the bulk of the materials are stored on the Hazmat lockers north of Building 512. These all have internal secondary containment of 175-gallons which is adequate for the materials stored.

One Hazmat locker on the northwest corner of the building stores large quantities of absorbent.

Also, Hazmat operates the Spill Response Trailer located at the east of the lockers. A variety of spill response equipment and absorbent is contained inside (see Section 3.4). It is mobilized throughout the Activity as needed.

Finally, the Hazmat lockers are located inside the flight line containment curbing at the edge of the flight apron. The containment curbing is south of the lockers. A rollover berm and a catchment basin exist in the curbing. The rollover berm allows vehicle access to the lockers. The catchment basin is located east of the lockers. The catchment basin provides containment and has a valve (downstream) that is closed to protect against a release to the storm drain.

## **Drainage**

The asphalt pavement surrounding the building drains north and south toward the streets.

## **Spill Prediction**

The largest spill inside of Building 512 would be a 66-gallon tank of aircraft cleaner. Spills outside of these storage units would flow to the concrete floor and possible outside to the asphalt pavement that surrounds the building.

The largest possible spill outside of Building 512 would be a 55-gallon drum. Spills occurring outside the building during materials transfer would flow to the asphalt pavement on the west side of the building and possibly flow north or south to the streets. Flow to the north could potentially reach the storm water conveyance along 9th Street, north of Building 512. In the vicinity of the hazardous material lockers, flows outside the lockers would be contained by the concrete containment curbing and catch basin system.

### **Security**

Building 512 is enclosed by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. The area has sufficient lighting to prevent vandalism and to detect spills and is equipped with a fire extinguisher, an emergency eye wash, clean-up equipment, and an emergency phone. Warning signs in both English and Spanish are posted on the fence in several places around the perimeter of the building.

The Hazmat lockers north of Building 512 are within the flight line fencing. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day. Activity security patrols these areas as part of their regular patrols.

### **Administration**

Operation of the building is primarily the responsibility of the Hazmat Department.

### **Recommended Corrective Action**

1. Install rollover berms across doorways of product storage area inside building, if significant quantities of materials will be stored inside. Some chemical storage without secondary containment.

## **6.45 WEAPONS EQUIPMENT MAINTENANCE, BUILDING 517**

### **Facility Description**

Building 517 is the Weapons Equipment Maintenance building which is used in conjunction with Armament Weapons Support Equipment (AWSE). Building 517 is located west of Building 516 and north of 8th Street. The interior building contains a parts washer and indoor flammable materials storage lockers (flammable lockers).

### **Storage**

Two flammable lockers exist on-site. The inside locker is used to store small quantities of grease, paints, detergents, and waste grease. Hazardous wastes are contained in a drum inside the building and disposed to Hazmat (as needed).

### **Transfer**

Hazardous materials are delivered to the building on an as-needed basis. Daily to weekly quantities are delivered. Minimal waste is generated which is delivered to Hazmat on a weekly basis.

### **Containment**

The tank for parts washing consisting of a soap and hot water washer has internal secondary containment. Flammable lockers at the site are equipped with internal containment which will hold spills from within. Absorbent materials (two 50-pound bags) are provided in the central maintenance area of Building 517.

## **Drainage**

The yard area drains to the north in the east yard and to the center of the west yard. There are no floor drains within the building and spills within the building would not reach the outside areas.

## **Spill Prediction**

Because only small quantities (less than 5-gallons) of materials are stored and used at this site, spills occurring inside the building would puddle on the concrete floor, and would not exit the building. Spills occurring outside Building 517 would flow onto the pavement and probably not reach any storm drains, sewer manholes, or unpaved areas.

## **Security**

The flammable lockers are inside Building 517. The unused Hazwaste locker is locked. The west yard is fenced as well. In addition, the entire Activity is fenced, and the main gate is manned 24 hours a day. Activity security patrols this area as part of their regular rounds.

## **Administration**

NAF El Centro personnel occupy the building, and Brown & Root is responsible for building maintenance.

## **Recommended Corrective Action**

1. No actions are required.

## **6.46 TRANSIENT LINE OPERATIONS, BUILDING 519**

### **Facility Description**

The Transient Line (T-Line) Operations Shop is located northeast of the intersection of J and 8th Streets. Primary operations from this building support the hangars and flight line. Aircraft fueling is performed west of Building 519.

### **Storage**

Small quantities of hazardous substances are stored in a flammable materials storage locker (flammable locker) in the central part of the building. An empty 2-gallon gas can was the only item stored in the cabinet at the time of the investigation. Reportedly, 1 to 2 quarts of oil or cans of spray paint may also be stored in this flammable locker.

### **Transfer**

Transfer operations are limited to the Hazmat storage locker. Materials are received and distributed by truck. New products are ordered based on demand.

### **Containment**

All of the flammable lockers are equipped with internal secondary containment sufficient to hold a spill from within the locker. The Hazmat locker is equipped with a 175-gallon containment cell in the floor of the unit, which is adequate to contain most, if not all, of materials stored inside the unit.

The Hazmat storage locker is located along the south fence of Building 519 no additional containment exists in this area.

A spill kit is located inside Building 519, but no absorbents are located near the Hazmat locker.

## **Drainage**

The area surrounding Building 519 slopes to the north toward 9th Street (a stormwater drainage swale). Runoff in this area flows directly to east boundary catch basin, which is locked. Environmental Division inspects collection of runoff and documents before draining (Figure 4).

## **Spill Prediction**

Spills inside Building 519 will usually be less than 1 gallon of oil or gasoline, which should be contained on the concrete floor and should not leave the building. Spills associated with the Hazmat locker could be as large as 55-gallons. Spills or leaks inside the lockers will be contained in the floor of the unit. Spills outside the locker would flow to 8th or 9th Street and then to catch basin on the Activity's east boundary.

## **Security**

Building 519 is secured by a fence on the south side of the building, which also secures the flight line. The flammable lockers are locked when not in use, as are the Hazmat storage lockers. The entire Activity is also fenced, with the main gate manned 24 hours a day. Only authorized people have access to NAF El Centro. The Activity security conducts regular patrols of the area.

## **Administration**

Brown & Root is responsible for the maintenance of the building.

### **Recommended Corrective Action**

1. Provide a spill kit at the Hazmat locker.
2. Construct curbing along the flight apron where it meets 8th Street, because of the Hazmat storage locker and aircraft fueling and staging between Hangar 6 and Building 519.

## **6.47 MEDICAL/DENTAL CLINIC, BUILDING 523**

### **Facility Description**

The Medical/Dental Clinic is located at the southeast corner of J Street and 8th Street. All medical offices and storage areas are inside the building. A generator is located outside at the southeast corner of the Clinic. Diesel fuel is stored adjacent to the generator in a 600-gallon AST with secondary containment.

### **Storage**

Diesel fuel is stored in a 600-gallon aboveground fuel storage tank with adequate secondary containment. The fill ports are located on the top of the tank and is secured to the concrete containment cell. The AST is painted for corrosion protection and is adequately labeled with warning signs. No high-level alarm exists on the tank.

### **Transfer**

Fuel is transferred to the generator by an aboveground fuel line. The AST is topped-off (as needed) using a 1,500-gallon tank truck during routine maintenance inspections. There are no formal procedures for inventory control. Average fuel transfers are on the order of twenty gallons.

### **Containment**

The AST at Building 523 is equipped with an expanded (2-cell) concrete secondary containment that can hold the entire contents of the tank. No absorbent material is located on-site, but it can be provided by the Hazmat Department (Building 512), as needed. Fuel tankers also have absorbent material when filling fuel tanks.

## **Drainage**

The area outside the building in the vicinity of the generator is unpaved with a drainage ditch approximately 50 feet south. Drainage flows south to the drainage ditch.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. These spills and line leaks at the tank will be contained by the secondary containment cell. Other line leaks would flow to the soil. The largest potential spill would be from the 1,500-gallon tank truck during servicing. In this case, the spill would flow to the soil and migrate south to the drainage ditch.

## **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols this area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators and inspects the AST during weekly and monthly preventative maintenance inspections. These inspections are documented by Brown & Root. Maytag provides the fueling services.

## **Recommended Corrective Action**

1. Provide absorbent material in the vicinity of the generator and AST.
2. Insufficient containment for storage volume, some corrosion on tank supports, recommend replacement with double walled tank.

## **6.48 HANGAR 6, BUILDING 524**

### **Facility Description**

Maintenance Hangar 6 is located north of 8th Street, south of the west end of Taxiway D. Building 524 consists of an aircraft maintenance hangar, an associated hazardous materials accumulation area. The building is shared with the Tactical Aircrew Combat Training System (TACTS), who perform computer simulation training. The building is a large, one-story hangar, constructed of steel. The hangar has a concrete floor and concrete pavement surrounds the building. Repair and maintenance of aircraft is conducted within and outside the hangar. Equipment housed within the hangar includes aircraft ground support and maintenance equipment. An aircraft wash rack (Building 641) is located west of the hangar. Buildings 531 and 532 north of the hangar are used for dry goods (equipment) storage by Brown & Root. Building 501 a ready support locker for temporary ordnance storage is also located north of the hangar.

A hazardous waste locker is associated with this building and is located at the southwest corner of the building.

### **Storage**

TACTS occupies the southwest area of the hangar and the unit has a flammable materials storage (flammable locker), which contains small quantities of oil, toner, WD-40, and lube oil. Typically, the total quantity of these products stored by TACTS is less than 5 gallons.

Hangar operations require small (daily use) quantities of paints, oils, grease, and fuels. These products are stored on a second flammable locker inside the hangar. Typical quantities stored are less than 20 gallons.

Maintenance activities in the hangar typically generate large quantities of waste liquids such as used oil, hydraulic fluid, lubricants, detergents, and aviation fuel (JP-5). These

wastes are collected in drip pans and buckets and by absorbent materials during maintenance activities and are consolidated in 55-gallon drums stored in the outdoor Hazwaste locker. Solid hazardous wastes such as drained oil filters, oily rags, used absorbent are also collected in drums and stored in the Hazwaste locker. This locker is a metal, self-contained, walk-in storage unit that locks. It is fitted with fire suppression, interior lighting, and exterior eye wash and fire extinguishers. The locker is also well marked with cautionary signs. Hazardous waste containers are placed on a rack-type floor over secondary containment inside the locker. The drums are labeled and grounded.

In addition to waste, a spill kit is contained in the Hazwaste locker. The spill kit contains several types of absorbent, as well as a waste receptacle.

A pad-mounted transformer is located in the southern end of the building. It reportedly contains non-PCB dielectric fluid.

### **Transfer**

Waste materials generated inside the hangar are collected in 2 to 5-gallon containers and transferred to the Hazwaste locker daily.

Hazardous waste accumulation is stored inside the locker for a maximum of 14 days. However, the Hazmat coordinators are encouraged to disposed of drums once they are full. The Hazmat Department (Building 512) collects these wastes each week (Wednesday), or they can be contacted as needed. All hazardous waste collected from the hangar is transported to the Hazardous Waste Compound (Building 530) by truck. The quantity of waste generated and transferred at the hangar depends on the amount of maintenance performed. An estimated 10 gallons of waste is generated on a weekly basis.

New chemical products required for maintenance activities are procured from Hazmat on a daily basis. Only daily use quantities are distributed. Chemical products are transported by vehicle to the hangar.

### **Containment**

The flammable lockers have a secondary containment cell in the bottom of the locker. This cell is capable of containing spills from the small quantity containers stored inside the cabinet. The Hazwaste locker is constructed with an approximately 175-gallon secondary containment cell that makes up the bottom of the storage unit. This containment cell is large enough to contain the entire contents of at least one of the containers stored in the locker.

A spill kit is also stored inside the compartment of the Hazwaste locker. Spill kits contain several types of absorbent, as well as a waste receptacle to mitigate typically small-scale spills.

Building 524 is the only hangar that is not contained within the flight line containment curbing.

### **Drainage**

The concrete flight apron in the vicinity of Building 524 slopes to the south toward the building and 8th Street. Runoff in the vicinity of the hangar flows south and into the street. Drainage from the areas west of Hangar 6 also flows south around the wash rack, which has a subtle perimeter berm around the drain.

The floor of the hangar is flat. There are no floor drains within the building and spills within the building would not reach the outside areas. Small spills to the floor would pool on the concrete floor.

## **Spill Prediction**

Indoor spills will usually amount to small quantities of oils, fuel, or cleaning solvents that would be contained in the flammable locker, or flow to the concrete floor of the hangar and form localized pools.

Spills inside the Hazwaste locker would be contained inside the unit. The maximum spill outside the locker would occur during the transfer of a 55-gallon drum or fuel from a tank truck during aircraft fueling. In the event of a significant spill, the hazardous waste fluids would flow to the concrete apron and migrate south into the street. Once in the street, there is potential for entering the storm drains.

## **Security**

Building 524 is located within the flight line fencing and the Activity security maintains regular patrols of the flight line operations. In addition, NAF El Centro is secured by a perimeter fence. The main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to the Activity.

## **Administration**

Brown & Root Transient Line operations schedule the use of Building 524. This hangar is used by transient squadrons while training at the Activity. Hazmat is responsible for coordinating all product and waste distributed to and collected from the building.

### **Recommended Corrective Action**

1. Monitor housekeeping practices of transient squadrons using this building.
2. Conduct SPCC procedures review for all squadron Hazmat coordinators.
3. Construct a perimeter curb at the south end of the building to contain any significant spills from migrating onto the street, or restrict aircraft staging and refueling in all areas not protected by a containment curbing.

## **6.49 SPECIAL WARFARE - EMERGENCY GENERATOR, BUILDING 528**

### **Facility Description**

Building 528 is used for training. The building is a 1-story metal frame with a concrete floor, 5-story wood frame parachute drying/testing tower attached on the west side of the building. The building is southwest of the intersection of 8th and G Streets and includes an emergency generator with an associated 100-gallon AST. The building contains three flammable materials storage lockers (flammable lockers), two in the inside of the building for corrosives and oxidizers and one outside for flammable. Materials stored in the lockers are in very small quantities.

### **Storage**

Lithium batteries are stored in the corrosive flammable locker inside the building. Additional corrosive materials include cleaning supplies in small quantities. Alkaline batteries are stored in the refrigerator. The oxidizer storage cabinet inside stores limited quantities of water treatment chemicals for the whirlpool spa. The outdoor flammable locker stores limited quantities of silicon and paint. Maximum storage is less than 10 gallons.

The AST is an integral part of the electrical generator and has a capacity of 100-gallons. The AST is used to store diesel fuel and has secondary containment in the base of the generator. A site-specific inventory of materials is presented in Annex 7.

### **Transfer**

Diesel fuel is added to the AST on an as-needed basis. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. The generator is checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top

off the fuel tank (as needed). There are no formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

Other hazardous materials for use inside Building 528 are transferred to the building as needed.

### **Containment**

The AST has secondary containment consisting of a square metal pan in the bottom of the generator. The containment cell is fitted with a drain plug and has the capacity to contain the entire contents of the tank (100 gallons). No absorbent material is located at Building 528; however, limited quantities of absorbent material are typically maintained on the tank trucks. The flammable lockers have internal secondary containment in the bottom of the cabinet that is adequate for the small quantities stored within.

### **Drainage**

The area to the west (location of emergency generator) and south of Building 528 is flat and unpaved. Areas north of the building are paved and consist of parking and grassy areas. There is a slight slope to the south toward the earthen storm drainage ditch approximately 50 feet south of the building.

### **Spill Prediction**

Minor spills may occur during filling of the 100-gallon diesel fuel AST. These spills would generally flow to the secondary containment where they could be cleaned up. The largest potential leak would result in the event of a release from the 1,500-gallon tank truck or hose. In this case fuel would flow to the ground surface, and possibly to the storm drain ditch south of the building.

## **Security**

There is no additional security around this building. However, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols the area as part of their rounds.

## **Administration**

NAF personnel occupy the building. Brown & Root maintains and operates the emergency generator. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted and documented by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

## **Recommended Corrective Action**

1. Provide absorbent materials in the vicinity of the emergency generator.

## **6.50 HAZARDOUS WASTE COMPOUND, BUILDING 530**

### **Facility Description**

NAF El Centro maintains a centralized hazardous waste accumulation area housed in Building 530. Building 530 is south of 8th Street and east of G Street. The facility is a non-permitted facility and, therefore, may only store the hazardous wastes up to 90 days. This 90-day time frame begins when hazardous waste containers enter the facility.

A metal canopy covers the facility. The facility is enclosed by a 6-foot chain-link fence approximately 246 feet by 137 feet in perimeter. The compound is a concrete slab approximately 50 feet by 180 feet, divided equally into four sections, approximately 50 feet by 25 feet each. Three of the sections are enclosed with a 5-inch high concrete curb and access via a rollover berm. Drainspouts from the roof are manifolded and discharge offsite.

### **Storage**

Hazardous wastes are stored in either metal or plastic containers of various sizes and are placed on wooden and metal pallets capable of holding up to four containers per pallet. Stored hazardous wastes include cleaning agents, oil contaminated with water from compressors, absorbents, chlorinated hydraulic fluid, waste jet fuel, waste engine oil, and magnesium and lithium batteries.

Drums and containers inside the compound are in good condition and are stored in an orderly fashion. All of the drums are properly labeled as to their contents.

## **Transfer**

Hazardous waste handlers from the Hazmat Department collect hazardous waste containers from hazardous waste accumulation points around the Activity and transfer the containers to the hazardous waste area. The containers are logged upon entry to the compound, and the Hazmat Department personnel initiate the required paperwork through the DRMO. The DRMO is contacted within the 90-day time frame to collect the hazardous waste from the compound. Before the waste containers are transferred off Activity (by DRMO), Hazmat inspects each load and authorizes the manifests.

## **Containment**

All hazardous substance containers are kept within the confines of the three curbed, concrete sections. Access is provided by rollover berms. The fourth partially-curbed section is for consolidation.

The top of the 5-inch curb on the east end of the concrete containment is approximately eleven inches off the ground, while the top of the concrete at the west end is only four inches above the ground and is not entirely curbed. Each section, with the exception of the west end of the fourth section, is completely contained by a 5-inch high concrete curb.

The area has been in operation for approximately five years and the condition of the concrete is good. There is an overhead shelter for the area to protect the hazardous wastes from exposure to extremely high temperatures.

## **Drainage**

Drainage within the compound is controlled. Control consists of the curbed, concrete slab as described above. Single drain pipes leading from the three curbed sections empty directly onto the concrete surface outside. The drains are valved outside the curbs and are operated in a closed position; there are locks on these valves. There is no method of separating spilled materials from storm drainage, should a spill occur in conjunction with any significant rainfall.

Downspouts from the roof are manifolded and discharge offsite. Drainage from the surrounding area flows north and west to 8th and G Streets, respectively.

## **Spill Prediction**

Hazardous waste spills could occur during loading or unloading operations at the compound, and within the compound as the result of improper container packing, handling, and storage. The largest spill would result from rupture or overturn of a 55-gallon drum.

Spills occurring within the curbed area would be contained by the berm or flow onto paved areas. Spills occurring outside the concrete area would flow directly onto the surrounding dirt and gravel surface. Spills to the sanitary sewer or storm drain system are unlikely.

## **Security**

The entire compound is enclosed by a locked, 6-foot high chain-link fence topped with three strands of barbed wire. The area has sufficient lighting to prevent vandalism and to detect spills. Fire extinguishers, emergency eye wash stations, spill cleanup equipment, and an emergency phone are located on-site. Warning signs are posted on the fence in several places around the perimeter of the compound. In addition, the

entire Activity is fenced with controlled access. Activity security patrols this area as part of their regular rounds.

### **Administration**

Operation of the facility is primarily the responsibility of Hazmat personnel.

### **Recommended Corrective Action**

1. No action necessary.

## **6.51 HANGAR DELUGE PUMP HOUSE/WATER STORAGE, BUILDING 533**

### **Facility Description**

The Hangar Deluge Pump House/Water Storage is located northeast of the intersection of 7th Street and J Street. It comprises a water pumping station with a Water Storage Tank. The facility serves as an auxiliary pump building and fire pumping station. Diesel fuel is stored outside in a 110-gallon AST on the west side of the building. The tank is horizontally mounted on steel posts with secondary containment.

A pad-mounted transformer is located within the southeast portion of the building.

### **Storage**

There is no hazardous substance inside Building 533. Diesel fuel is stored outside in a 110-gallon AST with adequate secondary containment. The tank painted and adequately labeled.

### **Transfer**

Fuel is supplied to the generator by an aboveground fuel line. The AST is topped off from a 1,500-gallon tank truck during routine maintenance.

### **Containment**

The AST is equipped with adequate secondary containment that can withhold the entire contents of the tank should a leak occur. No absorbent material exists at this building. Fuel tankers have absorbent material when filling fuel tank.

There is no secondary containment for the transformer at Building 533.

### **Drainage**

The area outside the building is flat and unpaved. There are no sanitary sewer manways or storm drains in the vicinity of Building 533. There is a drainage ditch to the north of Building 533 (approximately 200 feet).

### **Spill Prediction**

Minor spills may occur during filling of the fuel tank, which would be controlled by the secondary containment. Line leaks would flow to the ground surface or the floor of the building. The largest potential spill would occur from the 1,500-gallon tank truck during servicing. Fuel would flow to the surface soils and possibly impact the drainage ditch.

### **Security**

The entire Activity is fenced, and the gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. The emergency generator is inside a locked building. Activity security patrols the area as part of their rounds.

### **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted and documented by both Brown & Root, and on occasion by NAF El Centro personnel.

### **Recommended Corrective Action**

1. Provide absorbent materials for the AST.
2. Ensure the drain valve is secured.

## **6.52 SEWAGE LIFT STATION - EMERGENCY GENERATOR, BUILDING 554**

### **Facility Description**

Building 554 is located on the south side of 8th Street, east of A Street and houses a stand-by generator and diesel storage tank. Diesel fuel is stored in a 40-gallon fuel tank which is an integral part of the diesel engine.

### **Storage**

There is no hazardous substance other than diesel fuel inside Building 554. However, diesel fuel is stored in a 40-gallon fuel tank which is an integral part of the diesel engine.

### **Transfer**

The fuel storage tank is topped-off (as needed) from a 1,500-gallon tank truck during routine maintenance inspections. Fuel transfers are on the order of 5 gallons.

### **Containment**

There is no secondary containment for both the generator and the fuel tank. The facility is bermed except for the entrance to the building. Minor spills inside the generator room would remain within the building but major spillage would leak to the outside from the unbermed entrance. No absorbent material exists in this building, but fuel tankers have absorbent material when filling fuel tank.

## **Drainage**

The area outside the building is unpaved and slopes south toward an irrigation field. Spills to the sanitary sewer or storm drainage system are unlikely because there are no near-by facilities.

## **Spill Prediction**

Minor spills may occur during filling of the fuel tank. The fill port is attached to the emergency generator. Spills would flow to the concrete floor. Larger leaks could exit the building to the north.

## **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF EI Centro. The emergency generator building is locked, and the Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted and documented by Brown & Root, and on occasion by NAF EI Centro personnel.

## **Recommended Corrective Action**

1. Complete the bermed containment in front of the door with a rollover berm.
2. Provide absorbent material in the building.

## **6.53 EMERGENCY GENERATOR, BUILDING 567**

### **Facility Description**

Building 567 houses an emergency generator with an associated AST located west of Building 565 (Security) east of J Street, and north of 7th Street. Diesel fuel that supplies the generator in the event of a power failure is stored outside of the building in an approximately 110-gallon steel AST with secondary containment and check valve.

A pad-mounted transformer is located adjacent and west of Building 567. The transformer has a perimeter fence.

### **Storage**

Diesel fuel is stored in an approximately 110-gallon AST. The tank is cylindrical and located inside a metal secondary containment cell. Both are secured to a concrete pad. The fill port is the only access to the tank, and no high-level alarm exists on the tank. The tank is painted for corrosion protection. The tank is marked with cautionary signs.

No hazardous substances other than diesel fuel are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST on an as-needed basis. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. An aboveground pipe connects the AST to the generator. The generators are checked and operated weekly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection the fuel tank is topped off (as needed), but there are no other formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

## **Containment**

This AST has secondary containment consisting of a square metal pan. The containment cell is fitted with a drain valve and has the capacity to contain the entire contents of the tank (200 gallons). Absorbent material is not provided at Building 567; however, limited quantities of absorbent material are typically maintained on the tank trucks.

## **Drainage**

The area outside the building is flat and unpaved. There is a slight slope to the north toward the earthen storm drainage ditch approximately 50 feet north of the building.

## **Spill Prediction**

Minor spills may occur during filling of the 110-gallon diesel fuel AST. These spills would generally flow to the secondary containment where they could be cleaned up. The largest potential leak would result in the event of a release from the 1,500-gallon tank truck or hose. In this case, fuel would flow to the ground surface, and possibly to the storm water ditch.

## **Security**

Building 567 is locked. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF EI Centro. Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted by

Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

**Recommended Corrective Action**

1. Provide absorbent materials outside Building 567.

## **6.54 WELLS AIR START (SOUTH), BUILDING 575**

### **Facility Description**

The Wells Air Start (south) system, Building 575, is located on the southern portion of the concrete flight apron between Buildings 503 (Hangar 8) and 505 (Hangar 9). The Air Start system provides air pressure to jet engines, and consists of two compressor units, two banks of cylindrical air tanks, and a single air line that extends out toward the runway then turns west and parallels the taxiway for approximately 150 feet in the aircraft staging area. The compressor units are covered with a canopy-type metal frame roof. Condensate (oil/water mixture) is generated within the compressor during operation. This waste liquid is collected in the compressor knock-out pot and is discharged twice each day (during operation) to a 100-gallon AST located adjacent to the storage cylinders. Oily waste is also generated from internal compressor filters during compressor operation. This waste is transmitted via gravity to a 5-gallon bucket located near the compressors.

### **Storage**

Oil is mechanically drained from the compressor to a 5-gallon container. Condensate mixed with small quantities of oil, is drained from the air tanks and discharged to a 100-gallon AST that is located on a stand (approximately 4 feet off the ground on a concrete pad).

### **Transfer**

Oil drained from the compressor is collected in a 5-gallon bucket. Condensate is drained from the air tanks twice a day during operation. The condensate flows under pressure to the 100-gallon AST. Condensate is drained from the 100-gallon tank into 55-gallon drums and transported to the hazardous waste compound (Building 530) as needed.

## **Containment**

The entire southern Wells Air Start system is located inside the flight apron containment curbing. Also, the 100-gallon AST is contained within a metal containment pan adequate to contain the contents of the tank. The 5-gallon oil collection bucket does not have separate secondary containment, but it is inside the flight line containment curbing.

A spill kit is located adjacent to the air tanks.

## **Drainage**

Surface runoff from the facility flows south to the secondary containment curbing where it is collected in a series of closed-valved catchment basins. Liquids are not discharged from the drainage control system until the contents have been inspected by the Environmental Division Personnel.

## **Spill Prediction**

Potential sources of spills include overfilling or tipping over the 5-gallon waste oil bucket, spilling condensate during transfer, and overturning of the 100-gallon AST. The largest volume of condensate stored at the Wells Air Start facility is 100 gallons. In the event of a spill, the contents would be contained within the flight apron curbing and could be cleaned with the materials on-site.

## **Security**

The entire Activity is fenced, and the main gate is manned 24 hours a day. Only authorized personnel are allowed access to NAF El Centro. Security personnel patrol these areas as part of their regular rounds. Additionally, these Wells Air Start systems are within the secured flight line.

## **Administration**

The civilian contractor, Dyncorp, is in charge of operation and maintenance of the Wells Air Start systems.

## **Recommended Corrective Action**

1. Label tank as to the contents.
2. Protect tank with bollards to protect from vehicle traffic.

## **6.55 FUEL FARM CONTROL OFFICE - EMERGENCY GENERATOR, BUILDING 609**

### **Facility Description**

Building 609 is a single-story masonry block building located east of E Street at the Fuel Farm. The building houses all the controls for the Fuel Farm. South of this building is an emergency generator and a 40-gallon AST for diesel fuel storage. A pad-mounted transformer is located adjacent to the emergency generator and is fenced for security.

### **Storage**

Diesel fuel is stored in a 40-gallon double-walled AST. The tank is covered, painted for corrosion protection, and mounted on a metal stand. The AST is approximately 3 feet off the ground. The tank is adequately labeled, and there are no high level alarms on the tank. Bollards have been installed for protection from traffic.

Diesel fuel is stored in a 40-gallon AST. The tank is cylindrical and located inside a metal secondary containment cell. Both are secured to a concrete pad. The fill port is the only access to the tank, and no level controls exist on the tank. The tank is painted for corrosion protection. The tank is marked with cautionary signs.

No hazardous substances are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST on an as-needed basis. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. An aboveground pipe connects the AST to the generator. The generators are checked and operated weekly and monthly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top off the fuel tank (as

needed), but there are no formal procedures for inventory control. Typical fuel transfers are less than five gallons.

### **Containment**

Secondary containment is provided by a double-walled tank, with a drain plug. No absorbent material exists at Building 609; however, limited quantities of absorbent material are maintained on the tank trucks.

### **Drainage**

The area outside the building and near the AST is flat and unpaved. There is a slight slope to the west toward the earthen storm drainage ditch approximately 100 feet west of the building.

### **Spill Prediction**

Minor spills may occur during filling of the 40-gallon diesel fuel AST. These spills would generally flow to the ground surface, where they could be cleaned. The largest potential leak would result in the event of a release from the 1,500-gallon tank truck or hose. In this case, fuel would flow to the ground surface, and then to the storm water ditch.

### **Security**

The Fuel Farm is fenced, with three strands of barbed wire on top. Access is controlled through two gates. In addition, the entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted and documented by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

## **Recommended Corrective Action**

1. Provide absorbent material in the vicinity of this AST.

## **6.56 EMERGENCY GENERATOR, BUILDING 616**

### **Facility Description**

Building 616 is a single-story masonry block building located east of E Street inside the Fuel Farm.

The building houses an emergency generator and a 200-gallon AST. The building has a single entrance, and the area around the building is unpaved.

### **Storage**

Diesel fuel is stored in a 200-gallon AST. The tank is rectangular and secured to the concrete floor. The fill port is the only access to the tank, and no high-level alarm exists on the tank. The tank is painted for corrosion protection, and it is adequately labeled.

No hazardous substances other than diesel fuel are used or stored at this facility.

### **Transfer**

Diesel fuel is added to the AST on an as-needed basis. Fuel is transferred from a 1,500-gallon tank truck through the fill port in the top of the tank. An aboveground pipe connects the AST to the generator. The generators are checked and operated weekly by Brown & Root as part of the routine preventative maintenance inspection. During this inspection Maytag is contacted to top off the fuel tank (as needed). There are no formal procedures for inventory control. Typical fuel transfers are less than twenty gallons.

## **Containment**

Secondary containment consists of a berm across the doorway of the building. The containment area is sufficient to contain the contents of the tank. No absorbent material exists in Building 616; however, absorbent material is typically maintained on the tank trucks.

## **Drainage**

The area outside the building is flat and unpaved. There is a slight slope to the west toward the earthen storm drainage ditch approximately 70 feet west of the building.

## **Spill Prediction**

Minor spills may occur during filling of the 200-gallon diesel fuel AST. These spills and line leaks would flow to the floor of the building, where they could be cleaned up. The largest potential leak would result in the event of a release from the tank truck or hose. In this case, fuel would flow to the ground surface, and to the storm drain ditch to the west of the building.

## **Security**

The entire Fuel Farm is fenced, with three strands of barbed wire on top. Building 616 is also locked. The entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF El Centro. Activity security patrols the area as part of their rounds.

## **Administration**

Brown & Root maintains and operates the emergency generators. Weekly and monthly preventative maintenance inspections of the generator and tank are conducted and

documented by Brown & Root, and on occasion by NAF El Centro personnel. Maytag provides fueling services.

**Recommended Corrective Action**

1. Provide absorbent material inside Building 616.

## **6.57 ELECTRICAL SUBSTATION**

### **Facility Description**

The Electrical Substation is located in the southwest corner of NAF El Centro, west of the Water Treatment Ponds (Buildings 345 and 346). The Substation does not have an NAF El Centro building number, because it was built by and is currently owned and operated by Imperial Irrigation District (IID). The Substation is, however, located on NAF El Centro property, and part of its function is to supply power to the Activity. The entire facility is fenced and includes a control building and a number of transformers, capacitors, and switches. There is a lightning rod exists in the middle of the yard.

### **Storage**

Dielectric fluid is contained in 10 steel-cased transformers. All dielectric fluid is reportedly non-PCB containing; however only one is labeled accordingly.

Dielectric fluid is also contained in 24 pole-mounted capacitors located at the Electrical Substation.

Sulfur Hexafluoride gas is contained in two electrical circuit breakers and a compressed gas cylinder below the circuit breakers. The gas cylinder sits on the ground unsecured.

### **Transfer**

Material loading and unloading operations are performed in the yard area of the Substation. Dielectric fluid is transported to the site by truck on an as-needed basis.

## **Containment**

The pole-mounted transformers and capacitors sit on concrete pads with no secondary containment. The ground surface of the Electrical Substation consists of gravel and dirt, with no secondary containment.

## **Drainage**

The area surrounding the Electrical Substation is flat and unpaved. There is a slight slope to the west toward the earthen storm drainage ditch (Elder Canal) west of the Facility.

## **Spill Prediction**

Spills may occur during the fluid change-out of the 1-14 MVA transformers. These spills would flow to the gravel surface facility. The largest potential leak of dielectric fluid would result in the event of a release from the tank truck. In this case, fuel would flow to the ground surface and to the Elder Canal to the west of the building or to the east toward the water treatment plant ponds.

## **Security**

The entire Substation is fenced and locked. The entire Activity is fenced and the main gate is manned 24 hours a day by armed guards. Only authorized personnel are allowed access to NAF EI Centro. Activity security patrols the area as part of their rounds.

## **Administration**

The IID maintains and operates the Electrical Substation. Frequent inspections of the Electrical Substations are conducted. The IID provides fluid change-out services.

### **Recommended Corrective Action**

1. Construct partial earthen berm around truck unloading area to prevent spillage from entering the Elder Canal and Water Treatment Plant ponds.
2. Confirm transformers do not contain PCBs and label transformers appropriately.

## 6.58 TRANSFORMERS

During 1994 and 1995, NAF El Centro reportedly sampled over 200 transformers at the Activity to determine whether the oil the transformers use as dielectric fluid contained PCBs. All transformers that were determined to contain PCBs above 5 parts per million were scheduled to be replaced with non-PCB-containing equipment. The results of this effort are summarized in Tables 6-5 and 6-6. Table 6-5 summarizes the location and some general information about the transformer (voltage, brand, type, etc.), as well as the results of the PCB testing. Table 6-6 summarizes the transformers that were identified as PCB containing and PCB-contaminated.

In general, the transformers at NAF El Centro are pole-mounted or resting on concrete floors or pads raised slightly off the ground. Of those located on the ground, the transformer is either behind locked doors, enclosed in locked chain link fence, or behind concrete block walls.

During the November 1996 field work, no transformers showed evidence of leaks. All of the transformers at NAF El Centro are consider low-volume capacity and are located such that a fluid spill would not impact "navigable waters" as defined in 40 CFR 112 and, therefore, are considered exempt from SPCC requirements.

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**LIST OF ACRONYMS**

The following list contains acronyms associated with oil and hazardous substance spill response. Some are used in the SPCC, while others are provided for reference purposes.

|              |   |
|--------------|---|
| AA           | Administrative Agency   |
| AC           | Area Committee  |
| ACP          | Area Contingency Plan   |
| AEOC         | Activity Emergency Operations Center                                  |
| ANSI         | American National Standards Institute                                 |
| API          | American Petroleum Institute  |
| ASME         | American Society of Mechanical Engineers                              |
| AST          | Aboveground storage tank  |
| ASTM         | American Society for Testing and Materials                            |
| ATSDR        | Agency for Toxic Substances and Disease Registry                      |
| BBLS         | Barrels   |
| BOA          | Basic Ordering Agreement  |
| BOSC         | Base Operating Services Contractor                                    |
| BROWN & ROOT | Brown & Root Services Corporation (Current BOSC)                      |
| CAA          | Clean Air Act   |
| CALA         | Combat Artillery Loading Area   |
| CCR          | California Code of Regulations  |
| CERCLA       | Comprehensive Environmental Response, Compensation, and Liability Act |
| CERCLIS      | CERCLA Information System   |
| CFR          | Code of Federal Regulations   |
| CHIL         | Consolidated Hazardous Items List                                     |
| CHEMTREC     | Chemical Transportation Emergency Center                              |
| CHRIMP       | Consolated Hazmat Reutilization Implementation Management Program     |
| CHRIS        | Chemical Hazards Response Information System                          |
| CO           | Commanding Officer  |
| COE          | Corps of Engineers (U.S. Army)  |
| COMNAVBASE   | Commander Naval Base  |
| COPT         | Captain of the Port   |
| CNO          | Chief of Naval Operations   |
| CWA          | Clean Water Act   |
| DECON        | Decontamination   |
| DFM          | Diesel fuel, marine   |
| DLA          | Defense Logistics Agency  |
| DOC          | U.S. Department of Commerce   |
| DOD          | U.S. Department of Defense  |
| DOE          | U.S. Department of Energy   |
| DOI          | U.S. Department of the Interior                                       |
| DOJ          | U.S. Department of Justice  |

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|        |  |
|--------|--|
| DOL    | U.S. Department of Labor                           |
| DON    | U.S. Department of the Navy                        |
| DOS    | U.S. Department of State                           |
| DOT    | U.S. Department of Transportation                  |
| DPP    | Disaster Preparedness Plan                         |
| DRAT   | District Response Advisory Team                    |
| DRG    | District Response Group (USCG)                     |
| DRMO   | Defense Reutilization and Marketing Office         |
| DRMS   | Defense Reutilization and Marketing Service        |
| ED     | Environmental Division                             |
| EEZ    | Exclusive Economic Zone                            |
| EFA    | Engineering Field Activity (of NAVFAC)             |
| EFD    | Engineering Field Division (of NAVFAC)             |
| EHM    | Extremely hazardous material                       |
| EHS    | Extremely hazardous substance                      |
| EO     | Executive Order                                    |
| EPA    | U.S. Environmental Protection Agency               |
| EPCRA  | Emergency Planning and Community Right-to-Know Act |
| ERAP   | Emergency Response Action Plan (of FRP)            |
| ERT    | Environmental Response Team                        |
| ESA    | Endangered Species Act                             |
| ESI    | Environmental Sensitivity Index                    |
| F      | Fahrenheit   |
| FEMA   | U.S. Federal Emergency Management Agency           |
| FFA    | Federal Facility Agreement                         |
| FIC    | Facility Incident Commander                        |
| FOSC   | Federal On-Scene Coordinator                       |
| FQI    | Facility Qualified Individual                      |
| FR     | Federal Register                                   |
| FRERP  | Federal Radiological Emergency Response Plan       |
| FRP    | Facility Response Plan                             |
| FY     | Fiscal year  |
| GMT    | Greenwich Mean Time                                |
| GPM    | Gallons Per Minute                                 |
| GSA    | General Services Administration                    |
| HAZMAT | Hazardous material or Hazardous Materials Division |
| HHS    | U.S. Department of Health and Human Services       |
| HM     | Hazardous material                                 |
| HMIS   | Hazardous Materials Information System             |
| HS     | Hazardous substance                                |
| HW     | Hazardous waste                                    |
| IAA    | Interagency Agreement                              |
| ICP    | Integrated Compliance Plan                         |
| ICS    | Incident Command System                            |
| IDLH   | Immediately Dangerous to Life or Health            |
| IEP    | Integrated Emergency Plan                          |
| IFO    | Intermediate fuel oil                              |

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|              |   |
|--------------|---|
| IR           | Installation Restoration (program)                                  |
| IRT          | Immediate Response Team   |
| JAG          | Judge Advocate General  |
| LEPC         | Local Emergency Planning Committee                                  |
| M            | Million   |
| MAYTAG       | Maytag Aircraft Corporation   |
| MGO          | Marine Gas Oil  |
| MOA          | Memorandum of Agreement   |
| MOU          | Memorandum of Understanding   |
| MSDS         | Material Safety Data Sheet  |
| MSRC         | Marine Spill Response Corporation                                   |
| MTR          | Marine Transportation-Related                                       |
| NACE         | National Association of Corrosion Engineers                         |
| NAF          | Naval Air Facility (El Centro, CA)                                  |
| NAVFACENGCOM | Naval Facilities Engineering Command                                |
| NAVY         | U.S. Navy   |
| NCP          | National Oil and Hazardous Substances Pollution Contingency Plan    |
| NEESA        | Naval Energy and Environmental Support Activity                     |
| NEPA         | National Environmental Policy Act                                   |
| NEX          | Naval Exchange  |
| NFESC        | Naval Facilities Engineering Service Center                         |
| NFPA         | National Fire Protection Association                                |
| NIOSH        | National Institute for Occupational Safety and Health               |
| NOAA         | National Oceanic and Atmospheric Administration                     |
| NOSC         | Navy On-Scene Coordinator   |
| NOSCDR       | Navy On-Scene Commander   |
| NPDES        | National Pollution Discharge Elimination System                     |
| NRC          | National Response Center (USCG)                                     |
| NRDA         | Natural Resources Damage Assessment                                 |
| NRS          | National Response System  |
| NRT          | National Response Team  |
| NSCC         | National Scheduling Coordinating Committee                          |
| NSF          | USCG National Strike Force  |
| NSFCC        | USCG National Strike Force Coordination Center (Elizabeth City, NC) |
| NTR          | Non-Transportation Related  |
| NVIC         | USCG Navigation and Inspection Circular                             |
| OPS          | Office of Pipeline Services   |
| OPA 90       | Oil Pollution Act of 1990 (Public Law 101-380 of 18 Aug 90)         |
| OPNAVINST    | CNO Instruction   |
| OSC          | On-Scene Coordinator (same as NOSC)                                 |
| OSOT         | On-Scene Operations Team  |
| OSRO         | Oil Spill Removal Organization (classified by NSFCC)                |
| OSHA         | Occupational Safety and Health Administration                       |
| PA           | Pollution Abatement (funds)   |
| PCB          | Polychlorinated Biphenyl or Public Address (System)                 |
| PLA          | Plain Language Address (Navy jargon)                                |

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|         |   |
|---------|---|
| PMI     | Preventative Maintenance Inspection                   |
| POA     | Public Affairs Officer                                |
| POC     | Point of Contact                                      |
| POL     | Petroleum-oil-lubricant                               |
| PPE     | Personal protective equipment                         |
| PREP    | Preparedness-for-Response Exercise Program (USCG)     |
| PWC     | Public Works Center                                   |
| QI      | Qualified Individual                                  |
| RA      | Regional Administrator (EPA)                          |
| RCP     | Regional Contingency Plan                             |
| RCRA    | Resource Conservation and Recovery Act                |
| RPM     | Remedial Project Manager                              |
| RQ      | Reportable quantity (of hazardous substances)         |
| RQI     | Regional Qualified Individual                         |
| RRC     | Regional Response Center                              |
| RRT     | Regional Response Team                                |
| RSPA    | Research and Special Program Administration           |
| RWQCB   | Regional Water Quality Control Board (California)     |
| SARA    | Superfund Amendments and Reauthorization Act of 1986  |
| SCBA    | Self-Contained Breathing Apparatus                    |
| SCP     | Spill Contingency Plan                                |
| SDWA    | Safe Drinking Water Act of 1986                       |
| SECDEF  | Secretary of Defense                                  |
| SECNAV  | Secretary of the Navy                                 |
| SERC    | State Emergency Response Commission                   |
| SI      | Surface impoundment                                   |
| SIC     | Standard Industrial Classification (codes)            |
| SOFD    | Senior Fire Officer on Duty                           |
| SONS    | Spill of National Significance                        |
| SOP     | Standard Operating Procedure                          |
| SPCC    | Spill Prevention, Control, and Countermeasures (Plan) |
| SSC     | Scientific Support Coordinator (NOAA)                 |
| SUPSALV | Supervisor of Salvage (Navy)                          |
| SWDA    | Solid Waste Disposal Act                              |
| TBD     | To Be Determined                                      |
| TSCA    | Toxic Substance Control Act                           |
| UHF     | Ultra-High Frequency                                  |
| UIC     | Uniform Identification Code                           |
| UL      | Underwriters Laboratory                               |
| USCG    | U.S. Coast Guard                                      |
| USDA    | U.S. Department of Agriculture                        |
| USFWS   | U.S. Fish and Wildlife Service                        |
| USNPS   | U.S. National Park Service                            |
| UST     | Underground storage tank                              |
| VHF     | Very-High Frequency                                   |
| VOSS    | Vessel of Opportunity Skimmer System                  |



**ANNEX 1**  
**EMERGENCY RESPONSE PROCEDURES**

## **ANNEX 1 EMERGENCY RESPONSE PROCEDURES**

Annex 1 presents the procedures to be performed during an emergency situation involving oil and hazardous substances at NAF El Centro.

The remaining subsections include:

- Annex 1.1 Key Personnel Response Actions and Notifications, (Annex 1-10);
- Annex 1.2 Site Control and Evaluation, (Annex 1-15);
- Annex 1.3 Spill Containment and Control, (Annex 1-17);
- Annex 1.4 Spill Response Equipment (Annex 1-24);
- Annex 1.5 Evaluation Procedures, (Annex 1-44); and
- Annex 1.6 Sustained Actions (Annex 1-47) (Cleanup and Disposal, Cost Recovery, and Incident Review).

**Annex 1.1 and 1.2 contain the Emergency Notification Contact Lists.**

### **IMPORTANT**

BECAUSE OF THE HAZARDOUS NATURE OF MANY SUBSTANCES USED AT NAF EL CENTRO, ONLY THE NOSC, NOSCDR AND OSOT SHALL IMPLEMENT THE SPILL RESPONSE ACTIONS OF THIS SECTION. THE NOSC OR NOSCDR SHOULD REVIEW THESE PROCEDURES AND MAKE DISCRETIONARY DECISIONS PRIOR TO TAKING ACTION IN A PARTICULAR SITUATION.

SHOP PERSONNEL SHALL BE INSTRUCTED IN THEIR RESPONSIBILITIES AND IMMEDIATE ACTIONS TO TAKE IN CASE OF SPILLS, AND TRAINED IN THE USE OF PROTECTIVE GEAR AND EQUIPMENT REQUIRED TO CLEAN UP OPERATIONAL TYPE SPILLS OF SUBSTANCES WITH WHICH THEY WORK.

UNSUPERVISED PERSONNEL SHALL NEVER UNDERTAKE THE INVESTIGATION OF ANY OIL AND HAZARDOUS SUBSTANCE SPILL OR SUSPECTED SPILL.

## **EMERGENCY NOTIFICATION AND ACTIONS**

This section provides detailed procedures for the discoverer of a spill or potential spill, as well as the procedures required of the Activity Spill Response Center, the NOSCDR, and the OSOT once they are notified of the discovery. These descriptions are located on the following pages:

|  |                         |
|--|-------------------------|
| Discovery Response .....   | Annex 1-4               |
| Activity Spill Response Center .....                                 | Annex 1-5, 1-6          |
| NOSCDR.....  | Annex 1-7               |
| OSOT .....   | Annex 1-8               |
| Fire Department IRT .....  | Annex 1-8               |
| Medical .....  | Annex 1-8               |
| Security .....   | Annex 1-9               |
| Annex Table 1.1: Emergency Notification Contact List.....            | Annex 1-10 through 1-13 |
| Annex Table 1.2: Other Facility Response Personnel by Building ..... | Annex 1-14              |

## DISCOVERY RESPONSE

ANY INDIVIDUAL CAUSING OR DISCOVERING A SPILL, OR A SITUATION THAT MAY LEAD TO A SPILL OF OIL OR HAZARDOUS SUBSTANCE, SHALL IMMEDIATELY TAKE THE FOLLOWING ACTIONS. THE ORDER OF THESE ACTIONS WILL DEPEND ON EXISTING CONDITIONS.

**KEEP CALM**, think, and avoid panic.

**EVACUATE** area to a safe distance upwind and updrift from the spill.

**PASS THE WORD** to people in adjacent spaces.

**INFORM** your supervisor or the supervisor of the nearest facility.

**REPORT** spill immediately to:

**ACTIVITY SPILL  
RESPONSE CENTER  
PHONE: 911**

**NOSCDR  
(NAVAL ON-SCENE COMMANDER)  
PHONE: (760) 339-2534**

**GIVE** the following information if known. DO NOT wait until ALL the information is available.

- Your name and telephone number
- Location of the spill (Building No. or Shop Code)
- Number and type of injuries
- Identity or type and estimated amount of spilled material
- Source of spill (i.e., tank, container)
- Behavior of spilled material (reactions, leak, spill, fire observed)
- Anticipated movement of spill and actions being taken
- Time when the spill occurred

**ASSUME COMMAND** of the response operation until relieved by the NOSCDR or IRT.

**DO NOT** allow unauthorized persons to enter the spill area.

**RESTRICT** all sources of ignition (i.e., smoking, combustible engines, open flammables).

**PROVIDE** information and assistance, and **COMPLETE** Spill Response Checklist (Annex 2).



## ACTIVITY SPILL RESPONSE CENTER (continued)

**ESTABLISH** and **MAINTAIN** open communication with the NOSCDR/ALTERNATE NOSCDR on Channel 7, Frequency 142.800 (line or site), or Channel 8, Frequency 140.600 (Repeater) to carry out further instructions as necessary.

IF REQUESTED BY THE NOSCDR/ALTERNATE NOSCDR:

- ACTIVATE/ALERT** appropriate OSOT members. Annex Table 1.1 contains a telephone directory of all OSOT members. LOG exact time of each notification in the Incident Report Log Sheet (Annex 2).
- NOTIFY** NOSC COMNAVBASE, AS NECESSARY. Refer to Annex Table 1.1
- CONTACT** technical information sources including NAVFAC Southwest Division, CHEMTREC, or other sources for assistance in assessing the situation.
- COORDINATE** activities and communications between NOSCDR/ALTERNATE NOSCDR, NAF Fire Chief, and NOSC COMNAVBASE San Diego.
- ACTIVATE** local emergency assistance organizations or cleanup contractors, as directed. Annex Table 1.1 lists phone numbers.
- COORDINATE** any additional assistance requirements with any off-Base Area Response Center.

## **NOSCDR (NAVAL ON-SCENE COMMANDER)**

The **NOSCDR** is the primary command. The NOSCDR will coordinate response operations with the NAF El Centro Fire Chief or Senior Fire Officer on Duty (SFOD) and the On-Scene Operations Team (OSOT). The response operations conducted between the NOSCDR and the OSOT should run concurrently. NAF El Centro Fire Chief or Senior Fire Officer on Duty (SFOD) is in Command until relieved by the **NOSCDR**.

- ACTIVATE** the **SITE-SPECIFIC CONTINGENCY PLAN** (Annex 1).
- TAKE** immediate actions to protect people and property and avoid loss of life.
- ESTABLISH** a command post at a safe distance upwind from the incident.
- ACTIVATE** other **OSOT** members (Annex Table 1.1), as required. Designate a safe location and advise the responding units to stage at this location until instructed to take specific action.
- ASSESS** the situation using the **Site Control and Evaluation Actions** section of this plan (Annex 1.2).
- DETERMINE** the need for evacuation in conjunction with the IRT and OSOT. For evacuation procedures refer to (Annex 1.5). Notify Disaster Preparedness Officer (Annex Table 1.1).
- NOTIFY NOSC** of the spill. Determine whether or not spill exceeds a **Reportable Quantity (RQ)**. If so, NOTIFY the National Response Center (NRC) (Annex Table 1.1) and any state or local agencies.
- MAINTAIN** the **Oil/Hazardous Substance Incident Commander Actions Log Sheet** of all actions taken during the course of the response (Annex 2). Complete the **Spill Notification Form** (Annex 2) for incidents reported to the NRC.
- PREPARE AND FORWARD NAVY MESSAGE/NAVGRAM** concerning the spill, if required (OPNAVINST 5090.1B).

## **OSOT (ON-SCENE OPERATIONS TEAM)**

The **OSOT** will conduct response operations concurrently and in coordination with the NOSCDR. The NAF El Centro Fire Chief or SFOD will direct and coordinate the efforts of the OSOT emergency units (fire department, medial, and security).

The primary objective of the OSOT is to take immediate actions to protect people and property and avoid loss of life. Each OSOT member is described below.

### Fire Department IRT

- RESCUE/EVACUATE** all personnel from areas that may be exposed to the spilled substance, especially to vapors, smoke, or fire.
- SECURE IGNITION** of gas and electricity as soon as possible to reduce potential for fire or explosion. Remove ignition sources, such as combustion engines, electric motors, cigarette smoking, and open flammables.
- CONTROL FIRE**, if any.
- PREVENT** spill from spreading, if possible, without exposure to the spilled material. Follow procedures described under the **Spill Containment and Control** section of this plan (Annex 1).

### **WARNING**

RESCUE TEAM SHALL ENTER A **HIGH RISK** (LEVEL A OR B OR UNKNOWN) SITUATION **ONLY** IN THE EVENT OF A HAZARD IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH), AND SHALL WEAR FULL PROTECTIVE GEAR (INCLUDING SELF-CONTAINED BREATHING APPARATUSES [SCBAS], IN ACCORDANCE WITH NAF EL CENTRO'S **SITE-SPECIFIC HEALTH AND SAFETY PLAN** (ICP ANNEX 6).

The Fire Chief or SFOD will maintain radio communications with all units involved in the emergency. The NAF Crash/Fire/Rescue Net frequency Channel 7, Frequency 142.800 (line of site) or Channel 8, Frequency 140.600 (repeater) will be used.

## **Medical**

- ADMINISTER FIRST AID** to injured personnel. If substance(s) is (are) known, consult appropriate technical references and MSDSs (located at Hazmat [Building 512] or Medical Center Building [Building 523]) for First Aid measures and symptoms of exposure. **AVOID** all contact with the contaminant(s).
- TRANSFER** all injured to the clinic for medical attention as soon as possible.
- ALERT** the clinic that the injuries are **HAZMAT-RELATED**.

## **Security**

- ISOLATE** area of nonessential personnel.
- ESTABLISH** and **CONTROL** patrolled perimeter at a safe distance from the affected area to divert traffic and control public access.

ANNEX TABLE 1.1: EMERGENCY NOTIFICATION CONTACT LIST

| PRIORITIZED CONTACT LIST   | RESPONSE ROLE   | DAY PHONE  | 24 HOUR PHONE  |
|--|---|--|--|
| <b>Immediate Response Team (IRT) Dispatcher</b><br>Oil or Hazardous Materials Spills<br>NAFEC Federal Fire Department<br>Name: Fire Chief Steve Monteleone*<br>Response Time: Immediate        | First Responders<br><br>Refer to Annex 3 for specifics                                    | 911 (On-Base)<br><br>(760) 339-2222<br>(Off-Base or Cellular<br>Phone) | 911 (On-Base)<br><br>(760) 339-2222<br>(Off-Base or Cellular<br>Phone)               |
| <b>Naval On-Scene Commander (NOSCDR)</b><br>HAZMAT Director<br><br>Name: Pearl Cowan *<br>Response Time: < 1 hour  | Incident command and control<br><br>Refer to Annex 3 for specifics                        | (760) 339-2534<br>or<br>(760) 339-2521                                 | (520) 339-6182<br>(24 Hour)<br>(520) 782-6882<br>(Home)<br>(800) 516-0536<br>(Pager) |
| <b>Alternate NOSCDR</b><br>NAFEC Federal Fire Department<br>Name: Fire Chief Steve Monteleone<br>Response Time: < 1 hour   | Assist with incident command<br>and control<br><br>Refer to Annex 3 for specifics         | (760) 339-2232   | (760) 339-2524<br>(Security)   |
| <b>Navy On-Scene Coordinator (NOSC)</b><br>COMNAVBASE San Diego<br>Name: Captain Walters<br>Response Time: < 8 hours   | Incident command and control of<br>"worst case" response.<br><br>Regional Command Contact | (619) 532-1820   | (619) 522-1820<br>(619) 532-1820   |
| <b>National Response Center</b>  | Receiver of all spill reports and<br>notifier of appropriate FOSC                         | (800) 424-8802<br>(202) 267-2675                                       | (800) 424-8802<br>(202) 267-2675   |
| <b>On-Scene Operations Team (OSOT)/<br/>Facility Management Team (Training Type)</b>   | Assist in the management of the<br>incident   |  |  |
| Commanding Officer (CO) (not provided)   | Base Command<br>Notification  | (760) 339-2401   | (760) 339-2524<br>(security)   |
| Jay Chesser (OSHA 40)  | HAZMAT Waste Manager and<br>Cleanup Team Leader   | (760) 339-2521   | (760) 339-2524<br>(security)   |
| OS1 Swanegan (Not Provided)  | Chief of Security Police  | (760) 339-2524   | (760) 339-2524(security)   |
| Dan Guenthner (OSHA 40)  | Public Works Environmental  | (760) 339-2264   | (760) 339-2524(security)   |
| Rich Wilson  | Disaster Preparedness Officer   | (760) 339-2668   | (760) 339-2524(security)   |
| Chief Donna Corvin (Not Provided)  | Public Affairs Officer  | (760) 353-2519   | (760) 339-2524(security)   |
| E. Gamble  | Safety Coordinator  | (760) 339-2448   | (760) 339-2524(security)   |
| Unknown  | First Aid Coordinator   | (760) 339-2677   | (760) 339-2524(security)   |
| LT. White (Not Provided)   | Public Works Officer  | (760) 339-2201   | (760) 339-2524(security)   |
| Lt. J.G. Guerra (Not Applicable)   | Legal Officer   | (760) 339-2477   | (760) 339-2524(security)   |
| Activity Response Team, Fire Department, Hazmat Team<br>Point of Contact: NAF El Centro Fire Department<br>Response Time: < 1 hour   | Emergency medical<br><br>HAZMAT response support<br>Fire suppression support              | 911<br>or<br>(760) 339-2232  | 911  |
| Adjacent Navy/DOD Facilities (Access through NOSC)<br>NAVSTA, San Diego<br>Point of Contact: Officer of the Day (OOD)<br><br>Response Time: 3 to 8 hours depending on resource<br>requirements | Provide additional equipment<br>and personnel resources                                   | (619) 556-1247   | (619) 526-1247<br>(619) 556-1247   |
| NAS North Island<br>Point of Contact: Oil Spill Response<br><br>Response Time: 3 to 8 hours depending on resource<br>requirements  | Provide additional equipment<br>and personnel resources                                   | (619) 545-4382   | (619) 735-4382<br>(619) 545-4382   |
| Fleet Industrial Supply Center (FISC) Point Loma<br>Point of Contact: Control House Personnel<br><br>Response Time: 3 to 8 hours depending on resource<br>requirements                         | Provide additional equipment<br>and personnel resources                                   | (619) 553-5215   | (619) 553-1315<br>(619) 553-5215   |

ANNEX TABLE 1.1: EMERGENCY NOTIFICATION CONTACT LIST

| PRIORITIZED CONTACT LIST   | RESPONSE ROLE  | DAY PHONE                           | 24 HOUR PHONE                      |
|--|--|-------------------------------------|------------------------------------|
| SUBASE, San Diego<br>Point of Contact: Command Duty Officer<br><br>Response Time: 3 to 8 hours depending on resource requirements                            | Provide additional equipment and personnel resources                     | (619) 524-2001                      | (619) 553-7071                     |
| NAB, Coronado<br>Point of Contact: Command Duty Officer<br><br>Response Time: 3 to 8 hours depending on resource requirements                                | Provide additional equipment and personnel resources                     | (619) 437-3432                      | (619) 577-3432<br>(619) 437-3432   |
| NWS, Seal Beach<br>Point of Contact: Public Works<br><br>Response Time: 4 to 9 hours depending on resource requirements                                      | Provide additional equipment and personnel resources                     | (310) 594-7655                      | (619) 873-7273<br>(310) 594-7655   |
| NCBC, Port Hueneme<br>Point of Contact: Environmental Department<br><br>Response Time: 7 to 12 hours depending on resource requirements                      | Provide additional equipment and personnel resources                     | (805) 982-3766                      | (619) 551-3766<br>(805) 982-3766   |
| Kinder and Morgan Pipeline<br>Points of Contact: Martin L. Medina (pager)(760)370-2773<br>Mark Sandon (Env. Specialist)<br><br>Response Time: 3 hours        | Pipeline emergencies and maintenance                                     | (760) 352-6370<br>(714) 560-4867    | (760) 352-0677                     |
| Local (city/county) Response Team, Fire Department, HAZMAT Team<br><br>Point of Contact: El Centro Emergency Services Office<br>Response Time: < 2 hour      | Emergency notifications  | 7-911<br>or<br>(760) 352-2111       | 7-911<br>or<br>(760) 352-2111      |
| Local (city/county) Response Team, Fire Department, HAZMAT Team<br><br>Point of Contact: Imperial County Fire Department<br>Response Time: < 2 hours         | Emergency medical<br>HAZMAT response support<br>Fire suppression support | 7-911<br>or<br>(760) 353-5222       | 7-911<br>or<br>(760) 353-5222      |
| Local (city/county) Response Team, Fire Department, HAZMAT Team<br><br>Point of Contact: Imperial County Emergency Services<br>Response Time: Not determined | Emergency medical<br>HAZMAT response support<br>Fire suppression support | (760) 355-1164                      | (760) 355-1164                     |
| State Environmental Regulatory Agency<br><br>Point of Contact: California Regional Water Quality Control Board, Region 7                                     | Incident reporting   | (760) 346-7491                      | (760) 346-7491                     |
| State Environmental Regulatory Agency<br><br>Point of Contact: Dept. of Fish and Game Office of Oil Spill Prevention Response (OSPR)                         | Incident reporting   | (619) 467-0421 or<br>(619) 862-1752 | (916) 445-0045 or<br>(619)862-1752 |
| State Emergency Response Commission (SERC)<br><br>Point of Contact: California Office of Emergency Services (OES)  | Incident reporting   | (800) 852-7550                      | (800) 852-7550                     |
| Local Emergency Planning Committee (LEPC)<br><br>Point of Contact: Imperial County   | Notification   | (760) 525-4287                      | (760) 525-4287                     |
| State Police<br><br>Point of Contact: California Highway Patrol  | Traffic control<br>Evacuation<br>Crowd control                           | (760) 352-4111                      | (760) 352-4111                     |

ANNEX TABLE 1.1: EMERGENCY NOTIFICATION CONTACT LIST

| PRIORITIZED CONTACT LIST  | RESPONSE ROLE   | DAY PHONE                   | 24 HOUR PHONE   |
|---|---|-----------------------------|---|
| Sheriff Department<br>Point of Contact: Seeley Sheriffs Station   | Traffic control Evacuation<br>Crowd control   | (800) 452-2051              | 7-911   |
| Local Police<br>Point of Contact: NAF El Centro Base Security   | Traffic control Evacuation<br>Crowd control   | 911<br>or<br>(760) 339-2524 | 911<br>or<br>(760) 339-2524                                       |
| Local Police<br>Point of Contact: Sun Security (Civilian Base Security)   | Traffic control Evacuation<br>Crowd control   | (760) 339-2681              | (760) 339-2681  |
| <b>Oil Spill Response Organizations (OSROs)</b><br>Point of Contact: PWC, Naval Station San Diego<br>Response Time 3-8 hours depending on resource requirements | Provide additional equipment and personnel resources<br>Oil spill response and mitigation                         | (619) 556-5500              | (619) 556-5500  |
| Point of Contact: Clean Bay, Inc.<br>Response Time: < 12 hours depending on resource requirements   | Provide additional equipment and personnel resources<br>Oil spill response and mitigation                         | (510) 685-2800              | (510) 685-2800  |
| Point of Contact: California Marine Cleaning<br>Response Time: < 12 hours depending on resource requirements  | Provide additional equipment and personnel resources<br>Oil and hazardous substance spill response and mitigation | (619) 231-8788              | (619) 231-8788  |
| Point of Contact: ANCON Marine, Inc.<br>Response Time: < 12 hours depending on resource requirements  | Provide additional equipment and personnel resources<br>Oil and hazardous substance spill response and mitigation | (310) 548-8300              | (310) 548-8300  |
| <b>Local TV</b><br>Point of Contact: KEYC TV  | Broadcast evacuation notices  | (760) 353-9990              | (760) 353-9990  |
| Point of Contact: KSWT TV   | Broadcast evacuation notices  | (760) 352-3142              | (760) 352-3142  |
| Point of Contact: KYMA TV   | Broadcast evacuation notices  | (760) 352-6682              | (760) 352-6682  |
| Point of Contact: KROP AM 1300  | Broadcast evacuation notices  | (760) 344-1300              | (760) 344-1300  |
| Point of Contact: KUBO AM 89  | Broadcast evacuation notices  | (760) 377-8519              | (760) 377-8519  |
| Point of Contact: KSIQ FM 96  | Broadcast evacuation notices  | (760) 344-1301              | (760) 344-1301  |
| Point of Contact: KGBA FM 100   | Broadcast evacuation notices  | (760) 352-9860              | (760) 352-9860  |
| <b>Hospitals</b><br>Point of Contact: El Centro Regional Medical Center   | Medical support   | (760) 339-7100              | 7-911   |
| Point of Contact: Pioneers Memorial Hospital  | Medical support   | (760) 344-1912              | (760) 344-1912  |
| <b>Technical Support</b><br>Point of Contact: NAF El Centro Environmental Department  | Technical support coordination  | (760) 339-2264              | (760) 339-2524<br>(security)<br>(760) 339-2699 (base information) |
| Other Base Operations<br>Point of Contact: NAF El Centro Waste Water Plant  | Notification  | (760) 339-2230              | (760) 339-2230  |

## \*ADDRESSES OF KEY PERSONNEL

NOSCDR - PEARL COWAN  
1996 W. 13th Lane  
Yuma, AZ 85364

FIRE CHIEF/ALTERNATE NOSCDR - STEVE MONTELEONE  
NAF El Centro  
Bldg. 137 Code 35  
El Centro, CA 92243

ANNEX TABLE 1.2: OTHER FACILITY RESPONSE PERSONNEL BY BUILDING

| NAME                                 | DAY PHONE      | BUILDING  | RESPONSE JOB         | TRAINING DATE  |
|--------------------------------------|----------------|-----------|----------------------|----------------|
| William Sander                       | (760) 339-2225 | Fuel Farm | Hazmat Coordinator   | OSHA 40 (1994) |
| Jay Chesser                          | (760) 339-2949 | 112       | Hazmat Waste Manager | OSHA 40 (1995) |
| John Kemp                            | (760) 339-2231 | 120       | Hazmat Coordinator   | OSHA 40 (1995) |
| Dennis Kohlbeck                      | (760) 339-2432 | 127       | Hazmat Coordinator   | OSHA 40 (1995) |
| Dennis Kohlbeck                      | (760) 339-2432 | 128       | Hazmat Coordinator   | OSHA 40 (1995) |
| Raul Valenzuela/<br>Steve Monteleone | (760) 339-2232 | 137       | Hazmat Coordinator   | Not provided   |
| Danny Gutierrez                      | (760) 339-2218 | 157       | Hazmat Coordinator   | OSHA 40 (1995) |
| Danny Gutierrez                      | (760) 339-2218 | 165       | Hazmat Coordinator   | OSHA 40 (1995) |
| John Flemming                        | (760) 339-2670 | 200       | Hazmat Coordinator   | OSHA 40(1995)  |
| William Sander                       | (760) 339-2471 | 204       | Hazmat Coordinator   | OSHA 40 (1995) |
| Jay Chesser                          | (760) 339-2949 | 218       | Hazmat Waste Manager | OSHA 40 (1995) |
| Jay Chesser                          | (760) 339-2949 | 220       | Hazmat Waste Manager | OSHA 40 (1995) |
| John Welsh                           | (760) 339-2643 | 222       | Hazmat Coordinator   | OSHA 40 (1995) |
| Jay Chesser                          | (760) 339-2949 | 225       | Hazmat Waste Manager | OSHA 40 (1995) |
| Christy Walker                       | (760) 339-2948 | 286       | Hazmat Coordinator   | OSHA 40 (1995) |
| John Kemp                            | (760) 339-2230 | 351       | Hazmat Coordinator   | OSHA 40 (1995) |
| Dan Lineses                          | (760) 339-2689 | 362       | Hazmat Coordinator   | OSHA 40 (1995) |
| Dan Lineses                          | (760) 339-2689 | 378       | Hazmat Coordinator   | OSHA 40 (1995) |
| Danny Gutierrez                      | (760) 339-2218 | 400       | Hazmat Coordinator   | OSHA 40 (1995) |
| Ben Bunda                            | (760) 339-2527 | 484       | Hazmat Coordinator   | OSHA 40 (1995) |

| ANNEX TABLE 1.2: OTHER FACILITY RESPONSE PERSONNEL BY BUILDING |                |          |                      |                |
|--|----------------|----------|----------------------|----------------|
| NAME   | DAY PHONE      | BUILDING | RESPONSE JOB         | TRAINING DATE  |
| Jay Chesser  | (760) 339-2949 | 502      | Hazmat Waste Manager | OSHA 40 (1995) |
| Jay Chesser  | (760) 339-2949 | 503      | Hazmat Waste Manager | OSHA 40 (1995) |
| William Deshields  | (760) 339-2510 | 505      | Hazmat Coordinator   | OSHA 40 (1995) |
| Jay Chesser  | (760) 339-2949 | 508      | Hazmat Coordinator   | OSHA 40 (1996) |
| Jay Chesser  | (760) 339-2949 | 509      | Hazmat Coordinator   | OSHA 40 (1996) |
| Jay Chesser  | (760) 339-2949 | 512      | Hazmat Waste Manager | OSHA 40 (1995) |
| Jay Chesser  | (760) 339-2949 | 514      | Hazmat Coordinator   | OSHA 40 (1996) |
| AO1 Jones  | (760) 339-648  | 517      | Hazmat Coordinator   | OSHA 40 (1996) |
| Ben Bunda  | (760) 339-527  | 519      | Hazmat Coordinator   | OSHA 40 (1995) |
| Jay Chesser  | (760) 339-2949 | 524      | Hazmat Waste Manager | OSHA 40 (1995) |
| Jay Chesser  | (760) 339-2949 | 530      | Hazmat Waste Manager | OSHA 40 (1995) |
| Christy Walker   | (760) 339-2948 | 575      | Hazmat Coordinator   | OSHA 40 (1996) |

NOTE: Annex Table 1.2 includes sites with large quantity use or storage of oil or hazardous waste materials and/or waste. Emergency generator sites not included in this listing.

## **Annex 1.2 SITE CONTROL AND EVALUATION ACTIONS**

Promptly after arrival at the site, the NOSCDR and OSOT will initiate actions to establish control of the affected area so that effective stabilization of the spill is achieved with minimal risk to response personnel and the environment. These operations shall strictly follow the Site-Specific Health and Safety Plan in accordance with 29 CFR 1910.120 for site evaluation, delineation of work zones, entry into hazardous environments, and personnel/equipment decontamination established in standard manuals and training programs.

The following general rules shall apply in performing site control and evaluation operations:

### **Annex 1.2.1 SITE CONTROL**

- The **IRT**, with support from the NOSCDR, will establish and control the work and safety zones within the **CONTROL SITE**, consisting of the support area (command post, upwind), contamination reduction area (decontamination station), and contaminated area (immediate spill area in which actual or potential danger exists from the hazardous condition). See below.

| Source Area | Exclusion Zone | Contaminant Reduction Zone | Support Zone<br>wind direction |
|-------------|----------------|----------------------------|--------------------------------|
|-------------|----------------|----------------------------|--------------------------------|

- Entrance and exits from the contaminated area must be planned and emergency escape routes identified.
- Only personnel with proper protective equipment and an assigned activity will enter the contaminated area.
- Decontamination (decon) procedures must be established to control the spread of contaminants into the clean areas. The decon station shall be operational before personnel are allowed to enter into the contaminated area.
- Entry team shall be thoroughly briefed prior to each entry as to the potential hazards and procedures to be followed. They will also be debriefed after decontamination.
- All personnel and equipment leaving the contaminated area will be considered contaminated and will pass through the decon station for proper decontamination. The decon station personnel will also wear protective equipment that is appropriate to their function and potential or actual risk.

- All spent wash and rinse solutions and equipment used in decontamination must be considered contaminated and shall be properly decontaminated or disposed of according to applicable **Cleanup and Disposal** procedures (Annex 2.6.1).
- Security will establish a patrolled perimeter at a greater distance from the spill to keep nonessential personnel and the public away from the **CONTROL SITE**.

### **Annex 1.2.2 SITE EVALUATION**

The NOSCDR shall direct OSOT actions to define the potential or actual hazards involved and severity of the spill as quickly, safely, and completely as possible. The IRT will use the **Hazardous Material Incident Evaluation Log Sheet** (Annex 2) to record information gathered during these actions such as:

- Identify oil and hazardous substances involved. Look for labels, markings, and shipping papers on containers. Ask site personnel (supervisor, persons involved, knowledgeable people on the scene). Consult the **Site-Specific Contingency Plan** (Annex 1).
- Identify safety hazards and risks associated with the material involved. Use technical resources which are kept on hand in the OSOT response vehicles or in the Technical Library, or use appropriate Material Safety Data Sheets (MSDSs). Contact outside sources for technical assistance, if necessary (Southwest Division, CHEMTREC, HMIS), through the Activity Spill Response Center (Appendix C).
- Determine the relative seriousness of the situation. What is the condition of the spill? Is it contained? Stopped? If not contained, is it safe for response personnel to control/contain spill? These questions should be answered and properly communicated to the NOSCDR.
- If necessary, an entry team properly equipped will carefully monitor the conditions near the immediate spill area and its surroundings and take necessary samples to determine actual/potential dangers relating to the following:

- Possibility of fire/explosion
- Oxygen deficiency - particularly in confined spaces
- Presence of toxic gases or vapors
- Presence of incompatible materials
- Possibility of dangerous vapors affecting surrounding area

## WARNING

**EVERY ATTEMPT SHALL BE MADE TO ASSESS THE SITUATION FROM A SAFE DISTANCE IN ACCORDANCE WITH THE SITE-SPECIFIC HEALTH AND SAFETY PLAN (ANNEX 6). RESPONSE PERSONNEL SHALL WEAR PROPER BREATHING APPARATUS AND PERSONAL PROTECTIVE EQUIPMENT, IF NECESSARY, TO APPROACH THE SPILL. A BACKUP TEAM SHALL STAND READY TO PROVIDE SUPPORT. ENTRY TEAM SHALL APPROACH THE SPILL FROM UPWIND, ASSUMING A WORST-CASE AMBIENT CONCENTRATION OF THE SUBSTANCE.**

The following factors may drastically influence the proper precautionary measures, spill control methods, and necessary resources (i.e., personnel and equipment) for stabilization of the incident:

- Substance characteristics,
- Quantity spilled and physical state,
- Actual/potential hazards,
- Weather conditions,
- Spill movement,
- Existing containment barriers--natural or man-made,
- Existing drainage, and
- Distance to environmentally sensitive or highly populated areas.

### **Annex 1.3 SPILL CONTAINMENT AND CONTROL**

Direct actions toward controlling and containing the spill. The NOSCDR shall ensure that all appropriate safety precautions are taken, the best practical control methods have been selected, and proper spill response equipment is available. Control of immediate hazards, such as fire, explosion, or toxic gas release, shall have top priority. Depending on the type and condition of the spill, some or all of the following procedures may be employed.

The Navy is researching the use of nonmechanical oil recovery techniques. However, current Navy policy prohibits the use of nonmechanical oil recovery methods, including dispersants. If this policy should change in the future, this plan will be updated to address the additional capabilities and resource impacts.

## **A Spill With a Fire**

- DECIDE** whether to extinguish the fire or let it burn. **WEIGH** hazards of fighting the fire, post-fire cleanup and possible salvage.
- If decision is to extinguish fire, **FIGHT FIRE**, being careful to use fire fighting methods compatible with the substance(s) involved. Know exactly what substances are involved, the amounts stored, exact locations, reactions to water or other chemicals, and safe distance to fight the fire. Consult the National Fire Protection Act (NFPA) Hazardous Materials Fire Protection Guide and other applicable documents.
- STAY UPWIND** of the smoke. It may be TOXIC.
- REMAIN AT A SAFE DISTANCE** from hazards such as burning bottles, drums, and cans that are not vented and may rupture violently, spreading toxic chemicals.
- COOL** nearby containers and buildings to prevent fire from spreading. Use as little water as possible to minimize spreading of contaminants. **CONTROL RUNOFF WATER** by confining it to as small an area as possible, away from the fire fighting activity.
- SEEK ASSISTANCE** from local Fire Department(s), if necessary to control fire (Annex Table 2.1). Notify the NOSC that the local Fire Department has been called.
- AFTER EXTINGUISHING FIRE**, institute any action required to further control the spill, following the procedures described below for substances not on fire. If appropriate, re-evaluate the situation and take necessary precautionary measures (e.g., adjust control perimeters).

## **A Spill Without a Fire**

The methods chosen for containment/control of spread of the spilled material will depend on the type of spills, materials involved, and incident location. Table 3.3 describes various techniques applicable to different scenarios and identifies the type and location of equipment required.

- STOP SOURCE** of spill if it can be done safely through such actions as:
  - Close valves
  - Plug leaks in containers
  - Upright the container
  - Replace leaking containers
  - Empty leaking containers into nonleaking container
  - Encapsulate leaking container into larger recovery container

General considerations for stopping source of releases are given in Annex Table 2.4.

- **DISPERSE** toxic/flammable gases or vapors as soon as possible:

Ventilate indoor areas. Use blow-out ventilation or portable fans (EXPLOSION-PROOF only). Open doors and windows.

Dilute water-soluble liquids **ONLY IF ABSOLUTELY NECESSARY** to prevent imminent danger to life. Obtain authorization from Commanding Officer and notify NOSC. Be cautious of water-reactive chemicals. Consult MSDSs and other applicable technical references.

Flush corrosives to reduce vapors. Control runoff, as described below.

Use fog-streams to absorb vapors. Control runoff, as described below.

- **CONTAIN** spill or **PREVENT** spill or flush runoff from entering sewer or drainage systems or reaching surface or groundwater. Consult **Site-Specific Contingency Plan** (Annex 1) for location of drains and spill containment material.

Construct dams or dikes to contain spill as close to the source as possible. Use sand, dirt, or any available inert absorbent material, foams, or gels suitable to dam the flow.

Excavate temporary ditch, trench, or channel to direct spill runoff to containment. Use plastic cover for floor and storm drains.

- **MINIMIZE** spreading of dust or powder spills. Cover with nonreactive tarp to protect from wind or rain.

If the spill cannot be contained and it enters, or threatens to enter, the sanitary or storm sewer systems, canals, or the waters of the New River, then continued response comes under the authority of the NOSC. The NOSCDR shall:

- **ANTICIPATE** the movement of the spill. Contain spilled materials on NAF El Centro property or at property boundary outfalls to minimize the potential for the spill reaching the New River. Refer to Storm Water Outfall Map (Figure 3) for probable spill routes. Implement containment options discussed above.

- **CONTROL** the spread of contamination.

- **INSTRUCT** Public Works Officer (Annex Table 2.1) to take all necessary and possible action (construct dam, deploy temporary interception devices, etc.) to prevent the spill runoff from exiting NAF El Centro property.

□ Procedures applicable for controlling the spread of spill contamination, once it has entered the waterways, will depend on location, amount spilled, and properties of the material spilled. Control methodologies shall depend most strongly on how the material behaves in water (i.e., floats or sinks). Annex Table 1.3 lists basic methods for controlling flow.

- DETERMINE** the fate of the spill, or likely destination that the spill may spread to.
- VERBALLY NOTIFY** the NOSC of the incident (Annex Table 1.1), and **PROVIDE** the following information:
  - Oil or hazardous substance(s) involved and quantity spilled
  - Magnitude and severity of the threat to people, property, and the environment
  - Affected areas
  - Responsible party--Navy, non-Navy
  - Anticipated containment and cleanup actions
  - Type of **ASSISTANCE** required
  - Any other **RELEVANT** information
- COORDINATE** activation of appropriate government/private response organizations with the NOSC, as necessary to control and remedy the situation. If spill could threaten health off-Base, notify local officials, and the State Office of Emergency Services and the National Response Center (Annex Table 1.1).
- DIRECT** in-house resources to take all possible action to minimize the impact and spreading of the spill until additional assistance arrives at the scene.
- NOTIFY** the NAF El Centro Public Affairs Officer (Annex Table 1.1) to report to the scene. Direct him/her to keep informed of the size and nature of the spill and the response actions, and coordinate news releases with the NOSC Public Affairs Officer through COMNAVBASE San Diego.
- NOTIFY** the NAF El Centro Legal Officer (Annex Table 1.1). Direct him/her to report to the scene and coordinate all legal aspects associated with the spill.
- If the party responsible for the spill is a party other than the Navy:
  - INFORM** them of the spill and their financial liability.
  - If a contractor is involved, **NOTIFY** the contracting office.
- COOPERATE** with and **SUPPORT** all outside organizations directed by the NOSC to assist in the response effort.
- MAINTAIN** on-scene command until relieved by the NOSC, if necessary.
- When spill is contained and the situation is under control, **DECLARE** "End of Emergency" and **DEACTIVATE** OSOT emergency units. Direct them to be on alert in case conditions change.
- SUBMIT** Oil or Hazardous Substance Spill Report Message in accordance with OPNAVINST 5090.1B.

| ANNEX TABLE 1.3: METHODS FOR OIL AND HAZARDOUS SUBSTANCE SPILL CONTROL AND CONTAINMENT      |  |   |  |  |
|---|--|---|--|--|
| Technique   | Use/Scenario   | Requirements  | Characteristics  | Location   |
| Source Control<br>-Patching<br>-Plugging<br>-Valve shutoff<br>Uprighting/draining container | Stop release from leaking container or valve   | Leak control kit<br>Hand tools  | Spark-resistant tools, nonferrous<br>Spill site  | OSOT response vehicle  |
| Gas/Vapor Reduction   | Control/mitigate immediate hazard from flammable, explosive, and toxic gases/vapors    | Portable fans, blowers<br>Fire-fighting foams<br>Water sprays/mists<br>Sorbent pads/sheets                        | Explosion-proof electrical equipment<br>No power tools<br>Inert, nonreactive absorbent special for vapor control | OSOT response vehicle<br>Fire Dept.  |
| Drain Covering  | Avoid liquid spill runoff into floor/storm drains                                      | Cover sheets<br>Plastic<br>Rubber   | Chemical resistant   | OSOT response vehicle<br>Spill site  |
| Dust Covering   | Prevent dispersion of powder chemical spills   | Cover sheets  | Chemical resistant   | OSOT response vehicle<br>Spill site  |
| Herding   | Prevent expansion of liquid spills on land or insoluble, floating spills in water      | Brooms<br>Water hose stream<br>Compressed air   | Inert, nonreactive broom material  | OSOT response vehicle<br>Fire Dept.  |
| Diking/Damming  | Contain liquid runoff or water stream contaminated by soluble or miscible spill        | Earth-moving equipment and tools<br>Foams (polyurethane)<br>Absorbent barriers (sealed brooms, pillows, sandbags) | Inert, nonreactive sorbent material<br>Spark-resistant tools, nonferrous   | BOS Contractor<br>Transportation Yard<br><br>OSOT response vehicle<br>Outside contractor |
| Ditch/Trench Excavation, Culverts   | Divert liquid spills on land or water stream to containment                            | Earth moving equipment and tools<br>Prefabricated culvert   | Spark-resistant tools, nonferrous  | BOS Contractor<br>Transportation Yard<br><br>OSOT response vehicle<br>Spill site         |
| Floating Barriers   | Contain insoluble floating spills  | Booms<br>Device to deploy booms   | Chemical resistant   | Oil OSRO (Annex Table 2.1) (nothing on-site)   |
| Absorption  | Contain, collect and remove liquid spill on land or insoluble floating spills in water | Sorbents: sheets, mops, pillows, booms, and/or granular   | Inert, nonreactive materials<br>Specific sorbent for specific spill substance                                    | OSOT response vehicle<br>Spill site  |

| ANNEX TABLE 1.4: GENERAL CONSIDERATIONS FOR STOPPING SOURCE OF RELEASES |  |   |
|---|--|---|
| Criteria  | May Attempt                                      | Do Not Attempt  |
| Availability of safety equipment  | Sufficient                                       | None  |
| Nature of discharge   | Open valve or pump failure                       | Rupture or explosion  |
| Type of substance   | Nontoxic, nonreactive, nonvolatile, nonresistant | Highly toxic, dangerously reactive, volatile, corrosive, persistent |
| Volume spilled/volume remaining ratio                                   | Low  | High  |
| Containment of spillage   | Present and sufficient                           | None  |
| Rate of discharge   | Slow, dripping                                   | Fast, streaming   |
| Size of hole or rupture   | Small  | Large   |
| Potential of fire   | No potential                                     | Already existing  |
| Relative difficulty in stopping discharge                               | Easy   | Great   |

In no instance should an attempt be made to stop a discharge without the proper training, protective clothing, and safety equipment in accordance with the Site-Specific Health and Safety Plan.

#### **Annex 1.4            SPILL RESPONSE EQUIPMENT**

Annex Tables 1.5 through 1.20 present a summary of the spill response equipment inventory at NAF El Centro and other off-Base resources. These tables include:

Annex Table 1.5: On-Site Inventory: Skimmers (Annex 1.25)

Annex Table 1.6: On-Site Inventory: Vacuum Trucks (Annex 1.26)

Annex Table 1.7: On-Site Inventory: Boom (Annex 1.27)

Annex Table 1.8: On-Site Inventory: Pumping Equipment (Annex 1.28)

Annex Table 1.9: On-Site Inventory: Sorbents (Annex 1.29)

Annex Table 1.10: On-Site Inventory: Tool and Supplies (Annex 1.30)

Annex Table 1.11: On-Site Inventory: Communications Equipment (in use)  
(Annex 1.31)

Annex Table 1.12: On-Site Inventory Communications Equipment (stored)  
(Annex 1.33)

Annex Table 1.13: On-Site Inventory: Fire Fighting Equipment (Annex 1.33)

Annex Table 1.14: On-Site Inventory: Personal Protective Equipment (Annex  
1.34)

Annex Table 1.15: On-Site Inventory: Miscellaneous Capital Equipment (Annex  
1.35)

Annex Table 1.16: Equipment Available from Nearby DOD Installations (Annex  
1.36)

Annex Table 1.17: Equipment Available from Tier 1 OSROs (Annex 1.39)

Annex Table 1.18: Equipment Available from Tier 2 OSROs (Annex 1.41)

Annex Table 1.19: Equipment Available from Tier 3 OSROs (Annex 1.42)

Annex Table 1.20: OSRO Capability Minimums (Annex 1.43)

| ANNEX TABLE 1.5: ON-SITE INVENTORY: SKIMMERS                             |  |   |                |                |
|--|--|---|----------------|----------------|
| TOPIC  |  | SKIMMER TYPE 1  | SKIMMER TYPE 2 | SKIMMER TYPE 3 |
| TYPE   | OPERATING PRINCIPLE<br>(DIP, weir, belt, etc.) | No on-site skimmers<br>available  |                |                |
|  | MANNED OR UNMANNED                             |   |                |                |
| RECOVERY<br>RATES  | NOMINAL (gal/min)                              |   |                |                |
|  | DE-RATED DAILY (gal/day)                       |   |                |                |
|  | BUILT-IN STORAGE (gal)                         |   |                |                |
|  | BLADDER STORAGE (gal)                          |   |                |                |
| NUMBER   | ON HAND  |   |                |                |
| MANUFACTURE  | BRAND  |   |                |                |
|  | MODEL  |   |                |                |
|  | YEAR   |   |                |                |
| MOBILIZATION   | POINT OF CONTACT                               |   |                |                |
|  | DAY PHONE                                      |   |                |                |
|  | 24-HOUR PHONE                                  |   |                |                |
|  | STORAGE LOCATION                               |   |                |                |
|  | TRANSPORTATION<br>NEEDED                       |   |                |                |
|  | LAUNCH SITE(S)                                 |   |                |                |
|  | CREW NEEDED                                    |   |                |                |
| TIME (hrs)<br>(request <input type="checkbox"/> on water)                |  |   |                |                |
| UPKEEP   | OPERATIONAL STATUS                             |   |                |                |
|  | INSPECTION FREQUENCY                           |   |                |                |
|  | DATE OF LAST INSPECTION                        |   |                |                |
|  | TEST FREQUENCY                                 |   |                |                |
|  | DATE LAST TEST RUN                             |   |                |                |
|  | DATE LAST FUEL CHANGE                          |   |                |                |
| DEPLOYMENT   | LAST DEPLOYMENT DRILL<br>DATE                  |   |                |                |
|  | DEPLOYMENT FREQUENCY                           |   |                |                |
| TOTAL DE-RATED DAILY RECOVERY AVAILABLE ON-SITE FROM SKIMMERS (BBL/DAY): |  |   |                |                |
| COMMENTS: AVAILABLE THROUGH NOSC – COMNAVBASE SAN DIEGO                  |  |   |                |                |
| NOMINAL RATES: (NFESC-supplied skimmers)                                 |  | Given nominal rates, this table has math capability to calculate de-rated rates<br>and total de-rated rate. |                |                |
| DIP 3001   | 150 gal/min                                    |   |                |                |
| Rapid Response Skimmer   | 80 gal/min                                     |   |                |                |
| Small skimmer (Slurp)  | 20 gal/min                                     | Bbl = 42 gal  | day = 1440 min |                |

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| ANNEX TABLE 1.7: ON-SITE INVENTORY: BOOMS  |   |                            |             |             |
|--|---|----------------------------|-------------|-------------|
| TOPIC  |   | BOOM TYPE 1                | BOOM TYPE 2 | BOOM TYPE 3 |
| TYPE   | CLASS<br>(permanent, I, II, etc.)                         | No on-site flotation booms |             |             |
|  | SKIRT SIZE<br>(18", 24", etc.)                            |                            |             |             |
|  | STANDARD SECTION LENGTH (ft)                              |                            |             |             |
|  | END CONNECTORS<br>(ASTM, Navy)                            |                            |             |             |
| CONTAINMENT  | LENGTH (ft)   |                            |             |             |
|  | AREA (sq ft)<br>(area=length <sup>2</sup> /12.6)          |                            |             |             |
| MANUFACTURE  | BRAND   |                            |             |             |
|  | MODEL   |                            |             |             |
|  | YEAR  |                            |             |             |
| MOBILIZATION   | POINT OF CONTACT<br>DAY PHONE                             |                            |             |             |
|  | STORAGE LOCATION  |                            |             |             |
|  | TRANSPORTATION NEEDED                                     |                            |             |             |
|  | CREW NEEDED   |                            |             |             |
|  | TIME (hrs)<br>(request <input type="checkbox"/> in water) |                            |             |             |
| UPKEEP   | OPERATIONAL STATUS  |                            |             |             |
|  | INSPECTION FREQUENCY                                      |                            |             |             |
|  | DATE OF LAST INSPECTION                                   |                            |             |             |
| DEPLOYMENT   | LAST DEPLOYMENT DRILL DATE                                |                            |             |             |
|  | DEPLOYMENT FREQUENCY                                      |                            |             |             |
| COMMENTS: AVAILABLE THROUGH NOSC - COMNAVBASE SAN DIEGO                              |   |                            |             |             |
| Given lengths, this table has the Math capability to calculate the containment area. |   |                            |             |             |

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| ANNEX TABLE 1.8: ON-SITE INVENTORY: PUMPING EQUIPMENT   |   |   |   |                               |
|---|---|---|---|-------------------------------|
| TOPIC   |   | PUMP TYPE 1                                     | PUMP TYPE 2                                     | PUMP TYPE 3                   |
| PUMPS   | NUMBER  | 1   | 1   | 2                             |
|   | OPERATING POWER<br>(compressed air, electric,<br>etc.)  | GAS   | ELECTRIC  | GAS                           |
|   | NOMINAL RATE (gal/min)                                  | 100   | 100   | 50 EST                        |
|   | HOSE CONNECTION<br>(3/4" twist-lock, etc.)              | 2" Quick connect                                | 2" Quick connect                                | 2" Quick connect              |
| MANUFACTURE   | BRAND   | Robin   | CHE   | Not provided                  |
|   | MODEL   | EY 15 5206W                                     | 5Y11-1Wx  | Not provided                  |
|   | YEAR  | 1994  | 1994  | Not known                     |
| MOBILIZATION  | POINT OF CONTACT<br>DAY PHONE<br>24-HOUR PHONE          | Pearl Cowan<br>(760) 339-2534<br>(760) 339-2524 | Pearl Cowan<br>(760) 339-2534<br>(760) 339-2524 | Jerry Mayer<br>(760) 339-2218 |
|   | STORAGE LOCATION  | Bldg. 512                                       | Bldg. 512                                       | Bldg. 157                     |
|   | TRANSPORTATION<br>NEEDED                                | Vehicle   | Vehicle   | Vehicle                       |
|   | CREW NEEDED   | 1   | 1   | 1                             |
|   | TIME (hrs)<br>(request <input type="checkbox"/> in use) | < 1 hour  | < 1 hour  | < 1 hour                      |
| UPKEEP  | OPERATIONAL STATUS                                      | Good  | Good  | Good                          |
|   | INSPECTION<br>FREQUENCY                                 | Not provided                                    | Not provided                                    | Not provided                  |
|   | DATE OF LAST<br>INSPECTION                              | Not provided                                    | Not provided                                    | Not provided                  |
|   | TEST FREQUENCY  | Not provided                                    | Not provided                                    | Not provided                  |
|   | DATE LAST TEST RUN                                      | Not provided                                    | Not provided                                    | Not provided                  |
| DEPLOYMENT  | LAST DEPLOYMENT<br>DRILL DATE                           | Not provided                                    | Not provided                                    | Not provided                  |
|   | DEPLOYMENT<br>FREQUENCY                                 | Not provided                                    | Not provided                                    | Not provided                  |
| COMPATIBLE<br>COMPRESSORS   | NUMBER  | Not provided                                    | Not provided                                    | Not provided                  |
| COMPATIBLE<br>HOSE  | LENGTH (ft)   | 30  | 30  | 20                            |
| COMMENTS:   |   |   |   |                               |
| Common Navy pumps:<br>Wilden Model M8: comp air, 155 gal/min (delivers 75-100), 3/4" twist-locks. |   |   |   |                               |

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| ANNEX TABLE 1.9: ON-SITE INVENTORY: SORBENTS (STOCKPILED)   |                       |   |                   |                       |   |
|---|-----------------------|---|-------------------|-----------------------|---|
| STOCKPILED ITEM   | NATIONAL STOCK NUMBER | STOCKPILE LOCATION  | PURCHASE UNIT     | STOCK ON HAND (units) | STOCKING GOAL (units)                           |
| Pig Sorbent Boom  | 9330-01-281-0337      | On-site mobile trailer  | 60-ft package     | 1                     | 1   |
| Pig Sorbent Spaghetti Boom  | 9330-01-334-5036      | On-site mobile trailer  | 60-ft package     | 9                     | 5   |
| PIG Skimmer Absorb. Socks (3" x 48")  | open purchase         | On-site mobile trailer  | 10/box            | 2                     | 2   |
| Haz. Mat. PIG Absorb. Socks (3" x 46")  | open purchase         | On-site mobile trailer  | 12/box            | 1                     | 1   |
| Blue PIG Absorbent Socks (3" x 48")   | open purchase         | On-site mobile trailer<br>Bldg 135                                    | 20/box            | 4<br>30               | 4<br>10   |
| Haz. Mat. PIG Absorb. Dikes (5" x 10')  | open purchase         | On-site mobile trailer  | 2/box             | 1                     | 1   |
| Haz. Mat. PIG Absorb. Dikes (8" x 10')  | open purchase         | On-site mobile trailer  | 2/box             | 1                     | 1   |
| Haz. Mat. PIG Pillow (large)  | open purchase         | On-site mobile trailer  | 10/box            | 1                     | 1   |
| PIG Mat. Pads (Double-Wt.)  | open purchase         | On-site mobile trailer  | 100/bag           | 2                     | 2   |
| Skimming PIG Mat. Pads (16.5" x 160')   | open purchase         | On-site mobile trailer, Bldgs 362, 507 & 512                          | Roll              | 5<br>20               | 5<br>5  |
| PIG Skimmer Pillows   | open purchase         | On-site mobile trailer  | 10/box            | 1                     | 5   |
| PIG Skimmer Absorb. Socks (3" x 10')  | open purchase         | On-site mobile trailer  | 6/box             | 1                     | 1   |
| Sorbent Material (Speed dry or equivalent)  | open purchase         | On-site mobile trailer<br>Bldgs 135 & 512                             | 50 lb/bag         | 4<br>40<br>200        | 4<br>40<br>100                                  |
| Spill Kit (Plastic Drum)<br>Contain one or more:<br>- sorbent pads<br>- sorbent socks<br>- sorbent                    | open purchase         | Bldg 112, 218, 222, 225, 502, 503, 505, Fuel Farm, 362, 400, 507, 519 | 34-55 gallon drum | 15-20                 | 1 per building with oil or hazardous substances |
| <b>TOTAL SORPTION CAPACITY ON HAND (GAL): 1000 + (estimate)</b>   |                       |   |                   |                       |   |
| POINT OF CONTACT: Jay Chesser DAY PHONE: (760) 339-2949   |                       |   |                   |                       |   |
| COMMENTS:   |                       |   |                   |                       |   |
| Purchase of expendables is ongoing; stocks are replenished as needed, so year of purchase information is unavailable. |                       |   |                   |                       |   |

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ANNEX TABLE 1.10: ON-SITE INVENTORY: TOOLS AND SUPPLIES (STOCKPILED)

| STOCKPILED ITEM   | STOCKPILE LOCATION                                | UNIT       | STOCK ON HAND (units) | STOCKING GOAL (units) |
|---|---|------------|-----------------------|-----------------------|
| Rope, ½" /Nylon/Manila  |   | roll       |                       |                       |
| Rope, ¾" Nylon/Manila   |   | roll       |                       |                       |
| Rope, ½" Manila/Ladders   | Bldg. 512<br>Bldg 137                             | each       | 1<br>5                | 1<br>5                |
| Parachute Cord  |   | coil       |                       |                       |
| Shovel, Sq Nose (Long)  |   | each       |                       |                       |
| Shovel, Sq Nose (Short)   | Bldg. 127   | each       |                       |                       |
| Shovel, Rd Nose (Long)  |   | each       |                       |                       |
| Shovel, Rd Nose (Short)   |   | each       | 2                     | 2                     |
| Nonsparking Shovel/Plastic  | On-site mobile trailer<br>Bldg 127<br>spill carts | each       | 10<br>2<br>10         | 1                     |
| Nonsparking Shovel/Brass  | On-site mobile trailer<br>Bldg 127<br>Bldg 137    | each       | 2<br>4<br>4           |                       |
| Mop, Cotton   | On-site mobile trailer<br>Bldg. 137               | each       | 1<br>2                | 1                     |
| Squeegee  |   | each       |                       |                       |
| Can, Garbage (30-55 gal)  | Spill kits<br>Various shops                       | each       | 15-20                 | 15-20                 |
| Rags  | Various shops                                     | 50 lb bale | 5-10                  |                       |
| Pail, Plastic (5-gal)   |   | each       |                       |                       |
| Bags, Sand  |   | bale       |                       | 50                    |
| Gloves, Rubber  | Bldg. 512   | pair       | 200                   | 200                   |
| Goggles, Plastic  | Bldg. 512   | pair       | 20                    | 20                    |
| Bags, Plastic (large)   | Bldg. 512   | box        | 150                   | 150                   |
| Flashlights   | On-site mobile trailer<br>Bldg. 512, 137          | each       | 2<br>1<br>4           | 5                     |
| Visqueen (16"x100"x100 mil  | On-site mobile trailer                            | feet       | 100                   | 100                   |
| Broom   | On-site mobile trailer                            | each       | 1                     | 1                     |
| Speed Handle 15/16" socket  | On-site mobile trailer                            | each       | 1                     | 1                     |
| Bung Wrench   | On-site mobile trailer                            | each       | 1                     | 1                     |
| POINT OF CONTACT: Hazmat Bldg. 512 Jay Chesser and Mobile Trailer<br>Federal Fire Department Bldg. 137 DAY PHONE: (760) 339-2949<br>24-HOUR: (760) 339-2222<br>Chief Monteleone 911 or (760) 339-2232<br>24-HOUR: 911 or (760) 339-2222 |   |            |                       |                       |
| COMMENTS:   |   |            |                       |                       |
| Purchase of tools and supplies is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.  |   |            |                       |                       |

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ANNEX TABLE 1.11: ON-SITE INVENTORY: COMMUNICATIONS EQUIPMENT (IN USE)

| TYPE             | ASSIGNED TO             | No. OF UNITS | CALL SIGN OR PHONE NUMBER | PRIMARY NETWORK OR FREQUENCY | BRAND AND MODEL (year, if available) | CHARGER OR STORAGE LOCATION            | OP STATUS |
|------------------|-------------------------|--------------|---------------------------|------------------------------|--------------------------------------|--|-----------|
| HANDHELD RADIOS  | Security                | 10           |                           | 148.350                      | Motorola Hand Held Transceivers      | Bldg. 565                              | operable  |
|                  | Federal Fire Department | 22           |                           | Multiple frequencies (12)    | Motorola Sabre                       | on Federal Fire Units & at Air Station | operable  |
|                  | Hazmat                  | 2            |                           | multiple frequencies         | Motorola Sabre III                   | Bldg. 512                              | operable  |
|                  | Operations              | 6            |                           | multiple frequencies         | Motorola Sabre I                     | Bldg. 131                              | operable  |
| CAR/TRUCK RADIOS | Security                | 10           |                           | 148.350                      | Spectrum III Mobile Radios           | Bldg. 565                              | operable  |
|                  | Federal Fire Department | 8            |                           | multiple frequencies (12)    | Motorola                             | on Federal Fire Units                  | operable  |

COMMENTS: Information released via Commanding Officer, NAF El Centro. Day Phone: (760) 339-2401/2402

**WARNING:** ONLY "INTRINSICALLY SAFE" HANDHELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe".

This inventory table functions both as an On-Site Inventory and as part of the Communications Plan.

"Intrinsically safe" Motorola handheld radios and battery packs are marked with a green dot on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe".

Primary network or frequency not provided. Frequency is "for official use only."

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ANNEX TABLE 1.11: ON-SITE INVENTORY: COMMUNICATIONS EQUIPMENT (IN USE) (Continued)

| TYPE   | ASSIGNED TO             | No. OF UNITS  | CALL SIGN OR PHONE NUMBER | PRIMARY NETWORK OR FREQUENCY | BRAND AND MODEL (year, if available)        | CHARGER OR STORAGE LOCATION | OP STATUS |
|--|-------------------------|---|---------------------------|------------------------------|---|-----------------------------|-----------|
| BASE STATION RADIOS  | Security                | 1   |                           | 148.350                      | Computerized Motorola Dispatch System       | Bldg. 565                   | operable  |
|  | Federal Fire Department | 3   |                           | multiple frequencies         | Motorola                                    | Federal Fire Department     | operable  |
|  | Hangers                 | 1   |                           | multiple frequencies         | Motorola                                    | Various                     | operable  |
| CELLULAR PHONES  | HAZMAT                  | 1   |                           | multiple frequencies         | Motorola                                    | Bldg. 512                   | operable  |
|  | Fire Department         | 2   |                           |                              | Motorola                                    | Bldg. 137                   | operable  |
| <b>POINT OF CONTACT:</b>   |                         | <b>DAY PHONE:</b>   |                           |                              | <b>24 HOUR PHONE:</b>                       |                             |           |
| Security   |                         | (760) 339-2524  |                           |                              | (760) 339-2524                              |                             |           |
| Federal Fire Department<br>Bldg. 512<br>HAZMAT Emergency Response Team<br>Jay Chesser<br>Pearl Cowan   |                         | 911 or (760) 339-2232<br><br>(760) 339-2949<br>(760) 339-2534 |                           |                              | 911<br><br>(760) 339-2524<br>(760) 339-2524 |                             |           |
| <p><b>WARNING:</b> ONLY "INTRINSICALLY SAFE" HANDHELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe".</p> <p>This inventory table functions both as an On-Site Inventory and as part of the Communications Plan. "Intrinsically safe" Motorola handheld radios and battery packs are marked with a green dot on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe".</p> |                         |   |                           |                              |   |                             |           |

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| ANNEX TABLE 1.12: ON-SITE INVENTORY: COMMUNICATIONS EQUIPMENT (STORED)   |          |   |                     |                   |           |
|--|----------|---|---------------------|-------------------|-----------|
| TYPE   | HOW MANY | BRAND AND MODEL<br>(year, if available) | STORAGE<br>LOCATION | DATE LAST<br>TEST | OP STATUS |
| HANDHELD RADIOS  | 0        |   |                     |                   |           |
|  | 0        |   |                     |                   |           |
| SPARE BATTERY PACKS<br>FOR HANDHELD RADIOS   | 3        | GE MPD                                  | GEMO                | 6/94              | Good      |
|  | 3        | HT 600                                  | GEMO                | 6/94              | Good      |
| COMMENTS: Information released via Commanding Officer, NAF El Centro. Day Phone: (760) 339-2401/2402   |          |   |                     |                   |           |
| <p><b>WARNING:</b> ONLY "INTRINSICALLY SAFE" HANDHELD RADIOS AND RECHARGEABLE BATTERY PACKS SHOULD BE USED AT OIL SPILLS. A radio is "intrinsically safe" only if BOTH the radio and battery pack are "intrinsically safe".</p> <p>"Intrinsically safe" Motorola handheld radios and battery packs are marked with a green dot on the back, at the junction of the radio body and its battery pack; if BOTH dots are not present, the radio is not "intrinsically safe".</p> <p>Primary network or frequency not provided. Frequency is "for official use only."</p> |          |   |                     |                   |           |

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| ANNEX TABLE 1.13: FIRE-FIGHTING EQUIPMENT ON-SITE INVENTORY: FIRE-FIGHTING EQUIPMENT  |          |   |                           |              |  |                       |
|---|----------|---|---------------------------|--------------|--|-----------------------|
| EQUIPMENT   | HOW MANY | TYPE                                      | BRAND AND MODEL           | YEAR         | STORAGE<br>LOCATION                        | OP STATUS             |
| WATER<br>FOAM-<br>DISPENSING<br>VEHICLES  | 2        | Amertek<br>(also halon-<br>extinguishing) | Crash Model               | 1992<br>1991 | Fire Dept. Bldg 137                        | Good                  |
|   | 2        | Amertek                                   | Crash Model               | 1991         | Fire Dept Bldg. 137                        | Standby<br>(unmanned) |
|   | 1        | 1250 GPM                                  | KME Structural Pumping    | 1994         | Fire Dept. Bldg 137                        | Good                  |
|   | 1        | 750 GPM                                   | FTI Pumping               | 1975         | Fire Dept. Bldg 137                        | Standby<br>(unmanned) |
| OTHER FIRE<br>TRUCKS  | 1        | Pickup truck                              | GMC 3/4 ton               | 1975         | Fire Dept. Bldg 137                        | Good                  |
|   | 1        | 4x4 Utility truck                         | Chevy 1 ton               | 1987         | Fire Dept. Bldg 137                        | Good                  |
|   | 1<br>1   | Pickup truck<br>Mini pickup               | Dodge ½ ton<br>Ford ½ ton | 1995<br>1990 | Fire Dept. Bldg 137<br>Fire Dept. Bldg 137 | Good<br>Temp          |
| OTHER:  | 1        | Pickup<br>(equipment transport)           | Dodge 3/4 ton             | 1986         | Fire Dept. Bldg 137                        | Good                  |
| POINT OF CONTACT: Fire Chief Steve Monteleone DAY PHONE: (760) 339-2232 24-HOUR PHONE: 911/ (760) 339-2524<br>Assist. Deputy Chief Salgado (760) 339-2354 |          |   |                           |              |  |                       |
| COMMENTS:   |          |   |                           |              |  |                       |

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| ANNEX TABLE 1.14: ON-SITE INVENTORY: PERSONAL PROTECTIVE EQUIPMENT   |                     |  |   |   |          |   |           |
|--|---------------------|--|---|---|----------|---|-----------|
| GEAR   | LEVEL OF PROTECTION |  |   |   | HOW MANY | STORAGE LOCATION  | OP STATUS |
|  | A                   | B  | C | D   |          |   |           |
| SCBA RESPIRATOR (1 hours)<br>Cylinders   | X                   |  |   |   | 24<br>48 | Federal Fire Dept. Bldg 137   | Good      |
| SAR RESPIRATOR W/ESCAPE SCBA   | X                   |  |   |   | 0        |   |           |
| MOON SUIT  | X                   |  |   |   | 0        |   |           |
| INNER CHEMICAL-RESISTANT<br>GLOVES   | X                   |  |   |   | 0        |   |           |
| CHEMICAL-RESISTANT<br>BOOTS/SHOES  | X                   |  |   |   | 0        |   |           |
| HARD HAT   | X                   | X  | X | X   | 12       | Bldg. 512   |           |
| CHEMICAL-RESISTANT CLOTHING  |                     | X  |   |   | 10       | Bldg. 512   | Good      |
| OUTER CHEMICAL-RESISTANT<br>GLOVES   |                     | X  |   |   | 50       | Bldg. 512   | Good      |
| FULL-FACE CANISTER<br>RESPIRATOR   |                     |  | X |   | 5        | Bldg. 512   | Good      |
| STEEL TOED BOOTS   |                     |  | X |   | 32       | Federal Fire Dept. Bldg 137   | Good      |
| NFA APPROVED<br>HOOD/COAT/TROUSERS   |                     |  | X |   | 43       | Federal Fire Dept. Bldg 137   | Good      |
| NFA APPROVED FIRE HELMET   |                     |  | X |   | 43       | Federal Fire Dept. Bldg 137   | Good      |
| NFA APPROVED BOOTS   |                     |  | X |   | 43       | Federal Fire Dept. Bldg 137   | Good      |
| NFA APPROVED GLOVES  |                     |  | X |   | 43       | Federal Fire Dept. Bldg 137   | Good      |
| SAFETY GOGGLES   |                     |  |   | X   | 11       | Bldg. 512   | Good      |
| OTHER: SHIELDS   |                     |  |   | X   | 2        | Bldg. 512   | Good      |
| OTHER: BOOTS   |                     |  |   | X   | 6        | Bldg. 512   | Good      |
| POINT OF CONTACT: Pearl Cowan Hazmat Bldg. 512 DAY PHONE: (760) 339-2534 24- HOUR: 339-2524<br>Chief Steve Monteleone Federal Fire Dept Bldg 137 911 or 339-2232 911 |                     |  |   |   |          |   |           |
| COMMENTS:  |                     |  |   |   |          |   |           |
| Purchase of many of these items is ongoing; stocks are replenished as needed, so year of purchase information is unavailable.  |                     |  |   |   |          |   |           |
| LEVEL A PROTECTION:<br>respiratory max<br>eye max<br>skin max  |                     | LEVEL B PROTECTION:<br>respiratory max<br>eye max<br>skin medium |   | LEVEL C PROTECTION:<br>respiratory medium<br>eye max<br>skin medium |          | LEVEL D PROTECTION:<br>respiratory none<br>eye medium<br>skin minimal |           |

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ANNEX TABLE 1.15: ON-SITE INVENTORY: MISCELLANEOUS CAPITAL EQUIPMENT

| EQUIPMENT            | HOW MANY | TYPE                             | USE                              | YEAR                         | STORAGE LOCATION                 | OP STATUS |
|----------------------|----------|----------------------------------|----------------------------------|------------------------------|----------------------------------|-----------|
| BULLDOZERS           | 1        | Cat D-5                          | Range Maintenance                | 1984                         | BOSC Storage                     | Good      |
|                      |          |                                  |                                  |                              |                                  |           |
| BACKHOES             |          |                                  |                                  | 1973                         | BOSC Storage                     | Good      |
|                      | 1        | Case W14H                        | Drainage dikes and containment   | 1981                         | Niland Storage                   | Good      |
|                      | 2        | Case 580                         | Drainage dikes and containment   | 1989                         | BOSC Storage                     | Good      |
| MISC EARTH-MOVING    | 1        | Cat Graders                      | Support equipment                | 1978                         | BOSC Storage                     | Good      |
|                      | 1        | Ford Tractor (small)             |                                  | 1984                         | BOSC Storage                     | Good      |
|                      | 1        | Case Tractor (small)             |                                  | 1989                         | Weapons Bldg. 150                | Good      |
|                      | 1        | John Deer Tractor (small)        | Support equipment/transportation | 1977                         | BOSC Storage                     | Good      |
|                      | 2        | Flatbed trucks<br>2 ton<br>5 ton | Support equipment/transportation | 1988<br>1981                 | BOSC Storage<br>BOSC Storage     | Good      |
| BOOM-DEPLOYING BOATS | none     |                                  |                                  |                              |                                  |           |
|                      |          |                                  |                                  |                              |                                  |           |
|                      |          |                                  |                                  |                              |                                  |           |
| MISC BOATS           | none     |                                  |                                  |                              |                                  |           |
| GENERATORS           | 2        | 100-kw<br>15-kw                  | Temporary Power                  | 1985<br>1972                 | BOSC Storage                     | Good      |
| FORKLIFT             | 10       | various                          |                                  | various                      | BOSC Storage<br>Weapons Bldg 150 | Good      |
| OTHER:               | 1        | Cranes 15 ton                    | Support equipment                | 1985                         | BOSC Storage                     | Good      |
|                      | 4        | Bus 37 passenger                 | Transport personnel              | 1995<br>1986<br>1992<br>1985 | BOSC Storage                     | Good      |

POINT OF CONTACT: Danny Gutierrez Bldg. 145 DAY PHONE: (760) 339-2218 24 HOUR: 339-2524

BOSC = Base Operating Services Contractor

| ANNEX TABLE 1.16: EQUIPMENT AVAILABLE FROM NEARBY DOD INSTALLATIONS  |  |                    |      |
|--|--|--------------------|------|
| TOPIC  | INSTALLATION 1                                       | INSTALLATION 2     |      |
| NAME OF INSTALLATION   | NAVSTA, San Diego                                    | NAS, North Island  |      |
| 24-HR PHONE  | (619) 556-1247 or<br>(619) 556-8006                  | (619) 545-4382     |      |
| LOCATION OF INSTALLATION   | San Diego  | San Diego          |      |
| RESPONSE TIME (hr)   | 3-8 hrs  | 3-8 hrs            |      |
| SELF-SUPPORTING STRIKE TEAMS AVAILABLE   | BOOMING (BOOM-ANCHORS-BOATS-CREW)<br>Class I (50 ft) | 100                |      |
|  | Class II (50 ft)                                     | 17                 | 120  |
|  | Permanent  |                    | 1    |
|  | Mooring System (Deployable)                          |                    | 6    |
|  | SKIMMING (SKIMMER/CREW/BLADDER)<br>Small             |                    |      |
|  | Dip Rapid Response                                   | 1                  | 1    |
|  | Large (DIP 3001)                                     | 1                  | 1    |
|  | BOATS<br>Utility w/ Engine (Boston Whaler)           | 3                  | 5    |
|  | Vacuum Trucks  | 1                  | 1    |
|  | SWOBS, DONUTS<br>SWOB, Oil                           |                    |      |
|  | SWOB, Sewage   |                    |      |
|  | DONUTS   |                    |      |
|  | DONUT Servicing Subsystem                            |                    |      |
|  | SORBENTS, BAGS, BOXES                                | 100+               | 100+ |
| AGREEMENT (written, informal, etc.)  | COMNAVBASE 5090.1B                                   | COMNAVBASE 5090.1B |      |
| COMMENTS: Available through NOSC COMNAVBASE - San Diego  |  |                    |      |
| Strike Team availability is stated in terms of the basic equipment (i.e., a booming Strike Team stated as "1000 ft" would mean that 1000 ft of boom and all necessary support were available). |  |                    |      |

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| ANNEX TABLE 1.16: EQUIPMENT AVAILABLE FROM NEARBY DOD INSTALLATIONS (Continued)  |  |                    |                    |
|--|--|--------------------|--------------------|
| TOPIC  |  | INSTALLATION 3     | INSTALLATION 4     |
| NAME OF INSTALLATION   |  | NSC, Point Loma    | SUBASE, San Diego  |
| 24-HR PHONE  |  | (619) 553-5215     | (619) 553-7177     |
| LOCATION OF INSTALLATION   |  | San Diego          | San Diego          |
| RESPONSE TIME (hr)   |  | 3-8 hrs            | 3-8 hrs            |
| SELF-SUPPORTING STRIKE TEAMS AVAILABLE   | BOOMING (BOOM-ANCHORS-BOATS-CREW)<br>Class I (50 ft) | 70                 |                    |
|  | Class II (50 ft)                                     | 30                 | 6                  |
|  | Permanent (50 ft)                                    | 117                |                    |
|  | Mooring System (Deployable)                          | 4                  |                    |
|  | SKIMMING (SKIMMER/CREW/BLADDER)<br>Small             |                    |                    |
|  | Dip Rapid Response                                   | 1                  |                    |
|  | Large (DIP 3001)                                     | 1                  |                    |
|  | BOATS<br>Utility w/ Engine (Boston Whaler)           | 3                  |                    |
|  | Vacuum Trucks  | 3                  | 1                  |
|  | SWOBS, DONUTS<br>SWOB, Oil                           |                    |                    |
|  | SWOB, Sewage   |                    |                    |
|  | DONUTS   |                    |                    |
|  | DONUT Servicing Subsystem                            |                    |                    |
|  | SORBENTS, (Bags, Boxes)                              | 80+                |                    |
| AGREEMENT (written, informal, etc.)  |  | COMNAVBASE 5090.1B | COMNAVBASE 5090.1B |
| COMMENTS: Available through NOSC COMNAVBASE, San Diego   |  |                    |                    |
| Strike Team availability is stated in terms of the basic equipment (i.e., a booming Strike Team stated as "1000 ft" would mean that 1000 ft of boom and all necessary support were available). |  |                    |                    |

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| ANNEX TABLE 1.16: EQUIPMENT AVAILABLE FROM NEARBY DOD INSTALLATIONS (Continued)  |  |                    |     |
|--|--|--------------------|-----|
| TOPIC  | INSTALLATION 5                                       | INSTALLATION 8     |     |
| NAME OF INSTALLATION   | NAB, Coronado  | CBC, Port Hueneme  |     |
| 24-HR PHONE  | (619) 437-3432                                       | (805) 982-3766     |     |
| LOCATION OF INSTALLATION   | San Diego  | Ventura            |     |
| RESPONSE TIME (hr)   | 3-8 hrs  | 7-12 hrs           |     |
| SELF-SUPPORTING STRIKE TEAMS AVAILABLE   | BOOMING (BOOM-ANCHORS-BOATS-CREW)<br>Class I (50 ft) |                    | 10  |
|  | Class II (500 ft)                                    | 45                 | 1   |
|  | Permanent  |                    |     |
|  | Mooring System (Deployable)                          |                    | 1   |
|  | SKIMMING (SKIMMER/CREW/BLADDER)<br>Small             |                    | 2   |
|  | Dip Rapid Response                                   | 1                  | 1   |
|  | Large (DIP 3001)                                     |                    |     |
|  | BOATS<br>Utility w/ Engine                           | 2                  | 2   |
|  | Vacuum Trucks  | 1                  | 1   |
|  | SWOBS, DONUTS<br>SWOB, Oil                           |                    |     |
|  | SWOB, Sewage   |                    |     |
|  | DONUTS   |                    | 2   |
|  | DONUT Servicing Subsystem                            |                    | 1   |
|  | SORBENTS (Bags, Boxes)                               | 60+                | 100 |
| AGREEMENT (written, informal, etc.)  | COMNAVBASE 5090.1B                                   | COMNAVBASE 5090.1B |     |
| COMMENTS: Available through NOSC COMNAVBASE, San Diego   |  |                    |     |
| Strike Team availability is stated in terms of the basic equipment (i.e., a booming Strike Team stated as "1000 ft" would mean that 1000 ft of boom and all necessary support were available). |  |                    |     |

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| ANNEX TABLE 1.17: EQUIPMENT AVAILABLE FROM TIER 1 OSROs  |   |  |  |
|--|---|--|--|
| TOPIC  |   | OSRO                                     | OSRO   |
| NAME OF OSRO   |   | ANCON Marine, Inc.                       | Clean Bay Inc.   |
| 24-HR PHONE  |   | (310) 548-8300                           | (510) 685-2800   |
| NATURE OF OSRO<br>(private company, co-op, Navy, etc.)   |   | Corporation                              | Co-op  |
| LOCATION OF EQUIPMENT  |   | Wilmington, CA                           | San Francisco Bay  |
| RESPONSE TIME (hr)   |   | <12 hrs                                  | <12 hrs  |
| USCG OSRO<br>INFORMATION   | LEVEL RATED                                   | C D                                      | E  |
|  | OP ENVIRONMENTS RATED                         | R/C I/N                                  | R/C, I/N, O/OO   |
|  | CONTAINMENT BOOM (ft)                         | Owned 8,000 / Avail 13,750               | 49,900   |
|  | PROTECTIVE BOOM (ft)                          | 5000                                     | same as containment boom   |
|  | OIL RECOVERY (bbl/day)                        | Up to 79,860                             | 50,071 EDRC  |
|  | TEMPORARY STORAGE (bbl)                       | Up to 75,555                             | None to San Diego  |
| STRIKE TEAMS<br>AVAILABLE  | BOOMING<br>(BOOM-ANCHORS-BOATS-<br>CREW)      | Two boats with crew                      | Yes  |
|  | SKIMMING<br>(SKIMMER/CREW/BLADDER)            | 5  | Yes  |
|  | ONSHORE RECOVERY<br>(VAC TRUCK/CREW)          | 15 Owned                                 | No*  |
|  | SHORELINE CLEANUP<br>(CREW/SUPERVISION/EQUIP) | 200 Currently trained                    | No*  |
| CONTRACT   | NUMBER  | 2  | None   |
|  | NATURE<br>(BOA, co-op agreement, etc.)        | BOA (DTCCG 89-94-A-68F936)<br>also CO-OP | N/A  |
|  | RESPONSE MANDATORY?                           | No                                       | No   |
| COMMENTS:  |   |  | Not all equipment available outside<br>local area.<br>* Crews and equipment available<br>through contractors only. |
| <p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A □ E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals<br/> I/N = inland/nearshore (coastal)<br/> GL = Great Lakes<br/> O/OO = offshore and open ocean<br/> BOA = Basic Ordering Agreement</p> |   |  |  |

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| ANNEX TABLE 1.17: EQUIPMENT AVAILABLE FROM TIER 1 OSROs (Continued)  |  |  |  |
|--|--|--|--|
| TOPIC  |  | OSRO   | OSRO   |
| NAME OF OSRO   |  | Thompson Environmental, Inc.                         | California Marine Cleaning Inc.  |
| 24-HR PHONE  |  | (310) 595-1000                                       | (619) 231-8788   |
| NATURE OF OSRO<br>(private company, co-op, Navy, etc.)   |  | Corporation  | Private corporation doing business with US Government and commercial sources                   |
| LOCATION OF EQUIPMENT  |  | Long Beach   | 905 S. 33rd St., San Diego   |
| RESPONSE TIME (hr)   |  | < 12 hrs   | < 12 hrs   |
| USCG OSRO INFORMATION  | LEVEL RATED                                | River/Canal: Level C<br>Inland/Nearshore:<br>Level B | Not provided   |
|  | OP ENVIRONMENTS RATED                      | Not provided   | Not provided   |
|  | CONTAINMENT BOOM (ft)                      | 15,000   | 1500   |
|  | PROTECTIVE BOOM (ft)                       | Not provided   | 200  |
|  | OIL RECOVERY (bbl/day)                     | 740,569  | 500  |
|  | TEMPORARY STORAGE (bbl)                    | 1,276  | 1000   |
| STRIKE TEAMS AVAILABLE   | BOOMING (BOOM-ANCHORS-BOATS-CREW)          | 1 Boat with crew                                     | Yes  |
|  | SKIMMING (SKIMMER/CREW/BLADDER)            | 0  | Yes  |
|  | ONSHORE RECOVERY (VAC TRUCK/CREW)          | 23 120BBL V/T  | Yes  |
|  | SHORELINE CLEANUP (CREW/SUPERVISION/EQUIP) | 300 Crew Members                                     | Yes  |
| CONTRACT   | NUMBER                                     | None   | None   |
|  | NATURE (BOA, co-op agreement, etc.)        | BOA in progress                                      | N/A  |
|  | RESPONSE MANDATORY?                        | No   | No   |
| COMMENTS:  |  |  | The above equipment is presently available. Supplemental equipment can be purchased as needed. |
| <p>The USCG Oil Pollution Act of 1990 Update issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A □ E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals<br/>I/N = inland/nearshore (coastal)<br/>GL = Great Lakes<br/>O/OO = offshore and open ocean<br/>BOA = Basic Ordering Agreement</p> |  |  |  |

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| ANNEX TABLE 1.18: EQUIPMENT AVAILABLE FROM TIER 2 OSROs   |   |   |      |
|---|---|---|------|
| TOPIC   |   | OSRO  | OSRO |
| NAME OF OSRO  |   | Tier 2 OSRO responders are the same as Tier 1 responders. All Tier 1 responders have a response time of less than 12 hours. |      |
| 24-HR PHONE   |   |   |      |
| NATURE OF OSRO<br>(private company, co-op, Navy, etc.)  |   |   |      |
| LOCATION OF EQUIPMENT   |   |   |      |
| RESPONSE TIME (hr)  |   |   |      |
| USCG OSRO<br>INFORMATION  | LEVEL RATED                                   |   |      |
|   | OP ENVIRONMENTS RATED                         |   |      |
|   | CONTAINMENT BOOM (ft)                         |   |      |
|   | PROTECTIVE BOOM (ft)                          |   |      |
|   | OIL RECOVERY (bbl/day)                        |   |      |
|   | TEMPORARY STORAGE (bbl)                       |   |      |
| STRIKE TEAMS<br>AVAILABLE   | BOOMING<br>(BOOM-ANCHORS-BOATS-<br>CREW)      |   |      |
|   | SKIMMING<br>(SKIMMER/CREW/BLADDER)            |   |      |
|   | ONSHORE RECOVERY<br>(VAC TRUCK/CREW)          |   |      |
|   | SHORELINE CLEANUP<br>(CREW/SUPERVISION/EQUIP) |   |      |
| CONTRACT  | NUMBER  |   |      |
|   | NATURE<br>(BOA, co-op agreement, etc.)        |   |      |
|   | RESPONSE MANDATORY?                           |   |      |
| COMMENTS:   |   |   |      |
| <p>The USCG <u>Oil Pollution Act of 1990 Update</u> issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A □ E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals<br/>I/N = inland/nearshore (coastal)<br/>GL = Great Lakes</p> |   |   |      |

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| ANNEX TABLE 1.19: EQUIPMENT AVAILABLE FROM TIER 3 OSROs   |  |      |
|---|--|------|
| TOPIC   | OSRO   | OSRO |
| NAME OF OSRO  | Tier 3 OSRO responders are the same as Tier 1 responders. All Tier 1 responders have a response time of less than 12 hours |      |
| 24-HR PHONE   |  |      |
| NATURE OF OSRO<br>(private company, co-op, Navy, etc.)  |  |      |
| LOCATION OF EQUIPMENT   |  |      |
| RESPONSE TIME (hr)  |  |      |
| USCG OSRO<br>INFORMATION  | LEVEL RATED  |      |
|   | OP ENVIRONMENTS RATED  |      |
|   | CONTAINMENT BOOM (ft)  |      |
|   | PROTECTIVE BOOM (ft)   |      |
|   | OIL RECOVERY (bbl/day)   |      |
|   | TEMPORARY STORAGE (bbl)  |      |
| STRIKE TEAMS<br>AVAILABLE   | BOOMING<br>(BOOM-ANCHORS-BOATS-<br>CREW)   |      |
|   | SKIMMING<br>(SKIMMER/CREW/BLADDER)   |      |
|   | ONSHORE RECOVERY<br>(VAC TRUCK/CREW)   |      |
|   | SHORELINE CLEANUP<br>(CREW/SUPERVISION/EQUIP)  |      |
|   |  |      |
| CONTRACT  | NUMBER   |      |
|   | NATURE<br>(BOA, co-op agreement, etc.)   |      |
|   | RESPONSE MANDATORY?  |      |
| COMMENTS:   |  |      |
| <p>The USCG <u>Oil Pollution Act of 1990 Update</u> issues include a list of currently rated OSROs. For USCG-rated OSROs, this table gives the contractor's level (A □ E) and operating environments, then it lists the MINIMUM capacities of the contractor's strike teams in this installation's operating environment (taken from table 2-6, OSRO Capability Minimums).</p> <p>R/C = rivers/canals<br/> I/N = inland/nearshore (coastal)<br/> GL = Great Lakes</p> |  |      |

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| ANNEX TABLE 1.20: OSRO CAPABILITY MINIMUMS   |               |                  |                 |                                  |                            |
|--|---------------|------------------|-----------------|----------------------------------|----------------------------|
| OPERATING ENVIRONMENT  | CLASS (LEVEL) | CONTAINMENT BOOM | PROTECTIVE BOOM | OIL RECOVERY CAPACITY (DE-RATED) | TEMPORARY STORAGE CAPACITY |
| INLAND OR NEARSHORE<br>(inland or coastal)   | A             | 2,000 ft         | 6,000 ft        | 50 bbl/day                       | 100 bbl                    |
|  | B             | 6,000 ft         | 6,000 ft        | 1,250 bbl/day                    | 2,500 bbl                  |
|  | C             | 12,000 ft        | 12,000 ft       | 10,000 bbl/day                   | 20,000 bbl                 |
|  | D             | 18,000 ft        | 18,000 ft       | 20,000 bbl/day                   | 40,000 bbl                 |
|  | E             | 24,000 ft        | 24,000 ft       | 40,000 bbl/day                   | 80,000 bbl                 |
| RIVER OR CANAL   | A             | 2,000 ft         | 2,000 ft        | 50 bbl/day                       | 100 bbl                    |
|  | B             | 4,000 ft         | 4,000 ft        | 1,250 bbl/day                    | 2,500 bbl                  |
|  | C             | 4,000 ft         | 10,000 ft       | 1,500 bbl/day                    | 3,000 bbl                  |
|  | D             | 4,000 ft         | 16,000 ft       | 3,000 bbl/day                    | 6,000 bbl                  |
|  | E             | 4,000 ft         | 22,000 ft       | 6,000 bbl/day                    | 12,000 bbl                 |
| GREAT LAKES<br>(and their connecting waters, tributaries, and adjacent ports)  | A             | 2,000 ft         | 6,000 ft        | 50 bbl/day                       | 100 bbl                    |
|  | B             | 6,000 ft         | 6,000 ft        | 1,250 bbl/day                    | 2,500 bbl                  |
|  | C             | 12,000 ft        | 12,000 ft       | 5,000 bbl/day                    | 10,000 bbl                 |
|  | D             | 18,000 ft        | 18,000 ft       | 10,000 bbl/day                   | 20,000 bbl                 |
|  | E             | 24,000 ft        | 24,000 ft       | 20,000 bbl/day                   | 40,000 bbl                 |
| <p>Source: USCG Navigation and Vessel Inspection Circular (NVIC) No. 12-92.<br/> The USCG <u>Oil Pollution Act of 1990 Update</u> issues include a list of currently rated OSROs.<br/> The Navy has no facilities operating in an offshore environment (i.e., over 12 nautical miles from land), so the USCG "Offshore and Open Ocean Environments" category is not presented.</p> |               |                  |                 |                                  |                            |

**ANNEX 1.5                    EVACUATION PROCEDURES**

The NOSCDR will:

- DETERMINE** the need for evacuation of personnel from areas outside the **CONTROL SITE**. Evacuation distances and directions will be defined based on the following:
  - Consultation of the appropriate technical references (e.g., DOT Emergency Response Guidebook and other information sources,
  - Expert advice (e.g., Fire Department Chief in case of actual potential fire or explosion),
  - Actual conditions (e.g., confined spaces, movement of toxic fumes), and
  - The site-specific contingency plan.
  
- If personnel or Activity residents need to be evacuated, **NOTIFY** the Disaster Preparedness Officer (Annex Table 2.1), who shall initiate and coordinate the evacuation procedure in accordance with the Navy Base Disaster Preparedness Plan. General evacuation information is presented in Annex Tables 1.21 through 1.23.
  
- If evacuation of the civilian community off-Base becomes necessary or advisable, **IMMEDIATELY NOTIFY** the NOSC (Annex Table 1.1) who should coordinate the procedure with local officials.

| ANNEX TABLE 1.21: EVACUATION PLAN INFORMATION AND NOTIFICATIONS |                        |  |
|---|------------------------|--|
| PLAN AREA AND PLAN NAME   | COGNIZANT ORGANIZATION | PLAN LOCATIONS   |
| NAF El Centro Emergency Management Plan                         | NAF El Centro          | NAF Federal Fire Dept.            Bldg. 137<br>Public Works Environmental Dept.    Bldg. 504<br>NAF Operations                            Bldg. 214<br>Emergency Operations Center        Bldg. 565<br>Tenant Command Offices            9 Other Locations |

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| ANNEX TABLE 1.22: EVACUATION ALERTING                          |   |                      |
|--|---|----------------------|
| ORGANIZATIONS TO BE ALERTED IF AN OPA 90 FACILITY IS EVACUATED |   | CONTACT              |
| NAF El Centro  | NAF El Centro Fire Dept.                  | 911                  |
|  | NAF El Centro Security                    | 911                  |
|  | NAF El Centro CDO                         | Refer to Table 3.1   |
| LOCAL AUTHORITIES  | Imperial County Fire Dept.                | 7-911 (Off-Base 911) |
|  | Imperial County Emergency Services Office | Refer to Table 3.1   |
|  | Seeley Sheriffs Station                   | Refer to Table 3.1   |
| LOCAL HOSPITAL   |   | Refer to Table 3.1   |
| RADIO STATIONS   |   | Refer to Table 3.1   |
| TELEVISION STATIONS  |   | Refer to Table 3.1   |

**NOTE:** Initial contact with local radio and television stations should be coordinated through the Navy's Public Affairs Office and NAF El Centro's Public Affairs Coordinator. Refer to Annex Table 1.1.

| ANNEX TABLE 1.23: GENERAL EVACUATION PLANS: NAF EL CENTRO                              |   |  |
|--|---|--|
| TOPIC  |   | DISCUSSION OF KEY FACTS (OF USE DURING AN EMERGENCY)   |
| HAZARDOUS SUBSTANCES (with toxicity or volume to possibly trigger facility evacuation) | INVENTORY                               | This facility is located on Bennett Road and stores a maximum of 1,700,000 gallons of JP-5 and other petroleum-based fuels.  |
|  | PROBABLE SPILL FLOW PATHWAYS            | Most of the fuel (JP-5) is stored at the Fuel Farm. Most spilled fuel will be flow into surrounding drainage ditches. These drainage ditches flow north and/or west and eventually enter the New River.  |
|  | HAZARDS TO PERSONNEL                    | JP-5 is a flammable liquid that presents inhalation and skin contact hazards.  |
|  | WIND CONDITIONS AFFECTING HAZARDS       | Vapors from JP-5 will be dispersed downwind. All personnel should be kept upwind of spilled fuel oil. Prevailing winds are from the northwest (75%). Buildings located downwind of large spills may need to be evacuated. This decision will be made after evaluating existing conditions. |
|  | WATER CONDITIONS AFFECTING HAZARDS      | JP-5 is lighter than water and fuel that enters the New River will flow north towards the Salton Sea.  |
| EVACUATION INITIATION  | WHO DECLARES EVACUATION                 | The NOSCDR will determine when an evacuation of part or all of NAF El Centro is required. The NOSCDR, in consultation with the NOSC and state officials, will determine when an evacuation of the surrounding community is required.   |
|  | HOW SURROUNDING AREA ALERTING INITIATED | The rural community surrounding NAF El Centro will be notified of the need for evacuation by local and state police, and local media alerts.   |
|  | HOW FACILITY ALERTING INITIATED         | Facility personnel will be alerted by NAF security, the Federal Fire Department, and Station Emergency Cable Channel.  |
|  | METHODS OF ALERTING FACILITY PERSONNEL  | Facility personnel will be alerted by public address (PA) systems located in NAF security patrol vehicles. This method will be supplemented by the PA announcement system located atop Building 214.   |
|  | ALARM/SIREN LOCATIONS                   | Building 214   |
|  | ESTIMATED FACILITY EVACUATION TIME      | < 30 minutes   |

| ANNEX TABLE 1.23: GENERAL EVACUATION PLANS: NAF EL CENTRO |                                    |  |
|---|------------------------------------|--|
| TOPIC   |                                    | DISCUSSION OF KEY FACTS (OF USE DURING AN EMERGENCY)   |
| ON-SITE RESOURCES   | "SAFE HAVEN" LOCATIONS             | Safe havens for personnel and equipment will be established as appropriate depending on site specific conditions. The east gate located north of the fuel farm is an unmanned secondary base entrance.   |
|   | EMERGENCY BREATHING GEAR LOCATIONS | Bldg. 137; for Fire Department use only.   |
| DISASTER RESPONSE   | FIRE/AMBULANCE ARRIVAL ROUTE       | Fire/ambulances should enter NAF El Centro at the main gate on Bennett Road and proceed as directed to spill location.   |
|   | MEDICAL FACILITY FOR INJURED       | Branch Medical Clinic, Building 523  |
|   | HOW INJURED WILL BE TRANSPORTED    | Injured will be transported via ambulance.   |
| INITIAL STAGING AREAS IN FACILITY                         | WHERE                              | The initial staging area for NAF El Centro is the aircraft parking apron located south of the Federal Fire Department (Building 137).  |
|   | HOW PERSONNEL ARE ACCOUNTED FOR    | The supervisor of responding units and cleanup teams will account for personnel.   |
| EVACUATION ROUTES OUT OF FACILITY                         | HOW POSTED IN FACILITY             | Evacuation plans are posted in each building that contain reportable quantities at NAF El Centro.<br>County criteria of oil or hazardous substances  |
|   | ROUTES (primary)                   | The primary evacuation route at NAF El Centro is through the main gate located on Bennett Road.  |
|   | ROUTES (secondary)                 | The east gate located north of the fuel farm (unmanned).   |
| SAFE STAGING AREA(S) OUTSIDE FACILITY                     | LOCATION OF AREA(S)                | Predesignated staging areas outside the facility have not been established. These area will be established as needed and after site conditions have been evaluated. The area surrounding NAF El Centro is predominantly agricultural and/or undeveloped. |
|   | ROUTE FROM FACILITY (primary)      | Not applicable   |
|   | ROUTE FROM FACILITY (secondary)    | Not applicable   |
|   | HOW PERSONNEL ARE ACCOUNTED FOR    | The supervisors of responding units and cleanup teams will account for personnel.  |
| INCIDENT COMMAND CENTER                                   | WHERE                              | The NAF El Centro Command Center will be located at the aircraft parking apron located south of the Federal Fire Department (Building 137).  |
|   | COMMUNICATIONS CAPABILITIES        | Responding units will likely have individual communication devices. NAF El Centro can provide additional communication equipment as required (refer to Tables 3.11 and 3.12).  |
| EMERGENCY OPERATIONS CENTER                               | WHERE                              | The Emergency Operations Center is located at Building 565.  |
|   | TEAM                               | Executive Officer, Division Heads, Fire Chief.   |
|   | PHONE/FAX                          |  |
| COMMENTS:   |                                    |  |

Last Update: September 1999

## **Annex 1.6 SUSTAINED ACTIONS**

Sustained actions are those activities that take place after the initial threat or critical status of an emergency situation has been mitigated. These actions include cleanup and disposal (Annex 1.6.1), documentation and cost recovery (Annex 1.6.2), and incident review (Annex 1.6.3).

### **Annex 1.6.1 CLEANUP AND DISPOSAL**

Cleanup and disposal efforts begin after the initial response is completed and the critical nature of the situation has been reduced. Cleanup and disposal are the responsibility of the Public Works Officer under the authority of the NOSCDR (Annex Table 1.1).

Cleanup methods will depend on the characteristics of the spilled material, size of spill, location of spill, the character of the area, and the potential impacts. Annex Table 1.24 describes standard cleanup methods applicable to many NAF EI Centro oil and hazardous substance spills.

NOSCDR shall ensure that cleanup efforts are sufficient to meet regulatory requirements, prevent risk to health and safety of the public, prevent further contamination, and restore environmental quality of the affected area to the extent possible. The Public Works Officer or his/her designatee will direct efforts to:

**COLLECT** all necessary samples of the affected lands/waters to determine degree of contamination.

**DETERMINE** applicable cleanup method. Determine whether the spill material can be treated onsite or must be removed, treated, or disposed of elsewhere.

**CONSULT** appropriate technical references or information sources to determine correct procedures for cleaning up spills of the specific substance involved.

**ASSESS** Cleanup Team capabilities to conduct operations and determine needs for outside assistance.

If decision is to clean up spill with on-Base resources, the Public Works Officer in conjunction with the NOSCDR will assemble the proper Cleanup Team. Cleanup personnel shall use proper protective equipment and observe the standard health and safety procedures (ICP Annex 6) at all times during cleanup operations.

The Cleanup Team will:

**TREAT** the spill area to mitigate hazards (i.e. neutralization), if safe and feasible.

**CLEAN UP** and remove spill material using proper cleaning and handling method.

**THOROUGHLY CLEAN** all contaminated surfaces of the spilled material. Detergents and solvents can be used to remove residual spill material from asphalt and other hard, impermeable surfaces.

**COLLECT** spill residue, other contaminated material, and all nonreusable cleanup materials, including disposable clothing, sorbents, brushes, rags, brooms, and containers. **PROPERLY PACKAGE** material as hazardous waste and **MARK** and **LABEL** container in accordance with DOT requirements (49 CFR 100-199).

**THOROUGHLY** decontaminate and inspect all reusable protective clothing and equipment before they are returned to their proper storage location.

**THOROUGHLY** ventilate indoor areas.

If it is decided that cleanup is beyond the capabilities of the OSOT, the NOSCDR shall activate the appropriate contract or agreement for the cleanup, or coordinate any required additional assistance through the NOSC. In the event of cleanup by outside contractor or agency, the NOSCDR shall maintain on-scene command and support cleanup as needed, until relieved by the NOSC, if necessary.

After the spill cleanup, the NOSCDR shall:

**ENSURE** that all hazardous waste and contaminated articles generated by a spill and cleanup incident are properly containerized, stored, manifested, and turned in to HAZMAT for disposal according to the NAF EI Centro Hazardous Waste Management Plan.

**ASCERTAIN** that all indoor areas affected by the spill are safe before normal operations in those areas are resumed.

**DETERMINE** the need for necessary environmental restoration activities. Southwest Division (NAVFACENGCOM) can provide technical support in accessing the environmental impact of the spill, and the effectiveness of cleanup operations, and assist in developing a plan to restore the environmental quality of the affected area, if necessary. This support shall, when required, be requested of the NOSC.

| ANNEX TABLE 1.24: METHODS FOR OIL AND HAZARDOUS SUBSTANCE SPILL CLEANUP |   |  |  |  |
|---|---|--|--|--|
| Technique   | Use/Scenario  | Equipment Requirements   | Equipment Characteristics  | Equipment Location                                       |
| Absorption  | Contain, collect, and remove liquid spill on land or insoluble floating spills in water.                                | Sorbents<br>- sheets<br>- mops<br>- pillows<br>- booms<br>- granular | Inert, nonreactive materials<br>Specific sorbent for specific spill substance  | OSOT response vehicle                                    |
| On-Site Neutralization  | Neutralize acid or alkali spills to acceptable pH 6-8.  | pH meter or litmus paper<br>Neutralizing solution                    | Neutralizer must be weak<br>Acid spills:<br>sodium bicarbonate, soda ash, or lime<br>Alkaline spills:<br>weak acetic acid or citric acid | OSOT response vehicle<br>Spill site                      |
| Dilution*   | Dilute concentration of liquid spills on land to acceptable limits. Highly soluble, unreactive in water chemicals only. | Water hose stream  | Inert, nonreactive   | OSOT response<br>Fire department<br>Spill site           |
| Excavation  | Remove solid liquid spill substances and contaminated medium for proper disposal.                                       | Earth-moving equipment and tools<br>Disposal drums                   | Spark-resistant tools  | Public Works Dept<br>OSOT response vehicle<br>Spill site |
| Skimming  | Remove insoluble floating spills.   | Skimmer (DIP 3001)   | Specialized equipment  | OSRO (off-Base)  |
| Dredging/Pumping  | Remove insoluble, non-floating, and contaminated medium from bottom of a body of water.                                 | Dredging equipment<br>Pump   | Specialized equipment  | Public Works Dept.                                       |
| Suction   | Remove liquid spills from land or water surface.  | Vacuum Truck   | Specialized  | Outside contractor                                       |

\* Use this method as a last resort ONLY and with the approval of NOSC.

## **ANNEX 1.6.2 DOCUMENTATION OF COST RECOVERY**

**ALL ACTIVITIES** involved in the spill response efforts shall prepare a report describing their participation in the response and submit their report to the NOSCDR within 10 days following the incident. The report shall contain the following information:

- Description of response activities;
- Time and duration of response activities;
- Listing of personnel and equipment involved;
- Identification and inquires of damages incurred; and
- Discussion of problems, suggestions, etc.

If reimbursement to the Navy or by the Navy is appropriate, the NOSCDR shall document all expenditures incurred following procedures and submit a report to the NOSC within 15 days following the incident. Procedures for cost recovery will be pursued by the Public Works Officer, in coordination with the activity comptroller for routine spills, and with the NOSC contract specialist for major class spills that require activation of the NOSC Area Oil and Hazardous Spill Contingency Plan.

## **ANNEX 1.6.3 INCIDENT REVIEW**

Following the spill incident response, the NOSCDR shall convene with the OSOT technical staff and review all internal reports and evaluate spill response operations. They shall seek to identify improvements to response team operations, needs for additional training and/or equipment, and any additional lessons the incident can provide. The NOSCDR shall make any necessary changes to this Integrated Emergency Plan and coordinate them with the NOSC Area Plan. All modifications to the SPCC require documentation on the Record of Review and Amendment (follows Table of Contents and Certification).

**ANNEX 2**

**FORMS AND CHECKLISTS  
EMERGENCY RESPONSE TRACKING AND NOTIFICATION  
AND  
SPCC PROGRAM**

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## LIST OF FORMS AND CHECKLISTS

| <u>FORM/CHECKLIST</u>  | <u>PAGE</u>      |
|--|------------------|
| EMERGENCY RESPONSE FORMS/CHECKLIST .....   | ANNEX 2 - 1      |
| SPILL RESPONSE CHECKLIST .....   | ANNEX 2 - 2      |
| INCIDENT REPORT LOG SHEET.....   | ANNEX 2 - 3      |
| OIL/HAZARDOUS SUBSTANCE INCIDENT COMMANDER ACTIONS<br>LOG SHEET .....            | ANNEX 2 - 4      |
| SPILL RESPONSE NOTIFICATION FORM .....   | ANNEX 2 - 6      |
| RESPONSE EQUIPMENT INSPECTION CHECKLIST AND LOG....                              | ANNEX 2 - 10     |
| <br>SPCC PROGRAM CHECKLISTS .....  | <br>ANNEX 2 - 11 |
| <br>DISCHARGE PREVENTION MEETING LOGS .....                                      | <br>ANNEX 2 - 13 |
| SPCC AMENDMENT CHECKLIST .....   | ANNEX 2 - 14     |
| <br>SPCC INSPECTION SCHEDULE AND CHECKLISTS .....                                | <br>ANNEX 2 - 27 |
| <br>OIL/HAZARDOUS SUBSTANCE STORAGE FACILITY<br>INSPECTION .....                 | <br>ANNEX 2 - 28 |
| OIL/HAZARDOUS SUBSTANCE TRANSFER PIPING INSPECTION<br>CHECKLIST .....            | ANNEX 2 - 29     |
| LOADING/UNLOADING FACILITY INSPECTION CHECKLIST .....                            | ANNEX 2 - 30     |
| SPILL CONTAINMENT SYSTEM INSPECTION CHECKLIST .....                              | ANNEX 2 - 31     |
| OIL/HAZARDOUS SUBSTANCE CONTAINER STORAGE FACILITY<br>INSPECTION CHECKLIST ..... | ANNEX 2 - 32     |
| MONTHLY/ANNUAL TANK INSPECTION LOG .....   | ANNEX 2 - 33     |
| MONTHLY/ANNUAL TRANSFER PIPING INSPECTION LOG .....                              | ANNEX 2 - 34     |
| WEEKLY SECONDARY CONTAINMENT INSPECTION LOG.....                                 | ANNEX 2 - 35     |
| QUARTERLY LARGE QUANTITY STORAGE INSPECTION LOG ..                               | ANNEX 2 - 36     |

## **EMERGENCY RESPONSE FORMS/CHECKLIST**

**SPILL RESPONSE CHECKLIST**  
**(Discovery)**

If a spill is discovered in your shop or area

1. Stop transfer Yes \_\_\_\_\_ No \_\_\_\_\_
2. Notify next person in your chain of command:
  - (a) Time spill discovered:
  - (b) Chain of command notified Yes \_\_\_\_\_ No \_\_\_\_\_
  - (c) Person contacted:

UNLESS DIRECTED OTHERWISE, CONTINUE WITH THE FOLLOWING SEQUENCE

3. Initiate Immediate Notification Sequence:

|   |          |           |         |
|---|----------|-----------|---------|
| (a) Fire Department                             | 911/2222 | Time_____ | Contact |
| (b) Medical Department                          | 911/2666 | Time_____ | Contact |
| (c) Security                                    | 911/2524 | Time_____ | Contact |
| (d) Environmental Coord.                        | 2264     | Time_____ | Contact |
| (e) Navy On-Scene Commander,<br>Hazmat Director | 2534     | Time_____ | Contact |
| (f) Alternate NOSCDR,<br>Public Works Officer   | 2201     | Time_____ | Contact |

**\*\*\*NOTE: BASE DUTY OFFICE HAS HOME RECALLS\*\*\*\***

4. INFORMATION CONCERNING SPILL:
  - (a) Time and Type of Incident (spill/leak/fire): \_\_\_\_\_
  - (b) Type of Substance Spilled: \_\_\_\_\_
  - (c) Approximate Quantity: \_\_\_\_\_
  - (d) Spill Source Isolated (time): \_\_\_\_\_
  - (e) Personnel Injuries: \_\_\_\_\_
  - (f) Personnel Rescue: \_\_\_\_\_
  - (g) Areas Threatened: \_\_\_\_\_
  - (h) Weather Conditions: \_\_\_\_\_
  - (i) Actions Underway: \_\_\_\_\_
  - (j) On-scene Leader: \_\_\_\_\_
5. Clear the spill area of personnel and eliminate fire ignition sources as the situation dictates.
6. Deploy facility emergency response assets, if qualified.

**INCIDENT REPORT LOG SHEET**  
**(Activity Spill Response Center)**

**INITIAL INFORMATION REQUIRED:**

Name of informant:  
Location of spill:  
Number of injured and type of injuries (if applicable):  
  
Substance spilled:  
Amount spilled (estimated):  
Source of spill:  
Rate material currently spilling (estimated):  
Behavior of spilled material (leak, spill, fire):  
Anticipated movement of spill and actions being taken:  
  
Time spill occurred (estimate):  
Time notification received:  
Other information:

**IMMEDIATE NOTIFICATION SEQUENCE: (On-Base Uses Only 4-Digit Extension)**

|  |                 |       |
|--|-----------------|-------|
| Fire Department                              | Phone: 911/2222 | Time: |
| Medical Clinic<br>(If personnel injured)     | Phone: 911/2666 | Time: |
| Security                                     | Phone: 911/2524 | Time: |
| NOSCDR (Hazmat Director)                     | Phone: 2534     | Time: |
| ALTERNATIVE NOSCDR<br>(Public Works Officer) | Phone: 2201     | Time: |
| Fire Department Chief                        | Phone: 2232     | Time: |

**ACTIVATION/ALERT (at NOSCDR/ALTERNATE NOSCDR request):**

|  |                                |       |
|--|--------------------------------|-------|
| Environmental Director                 | Phone: 2264                    | Time: |
| Public Works Officer<br>(Cleanup Team) | Phone: 2201                    | Time: |
| Hazmat Waste Manager                   | Phone: 2524                    | Time: |
| Disaster Preparedness<br>Officer       | Phone: 2668                    | Time: |
| Safety Officer                         | Phone: 2297                    | Time: |
| Public Affairs Officer                 | Phone: 2519                    | Time: |
| Legal Officer                          | Phone: 2477                    | Time: |
| Spill Remediation Team                 | (Contractor to be determined.) |       |

(2 pages)  
**OIL/HAZARDOUS SUBSTANCE INCIDENT COMMANDER ACTIONS LOG SHEET**  
**(Navy On-Scene Command Responsibility)**

1. Location: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_\_\_  
 Material(s) Involved: Name: \_\_\_\_\_  
 Physical Properties \_\_\_\_\_  
 \_\_\_\_\_  
 Chemical Properties \_\_\_\_\_  
 \_\_\_\_\_

| 2. OSOT Units Activation            | Arrival Time | Unit Leader/<br>Coordinator |
|-------------------------------------|--------------|-----------------------------|
| Fire Department                     | _____        | _____                       |
| Medical Clinic/Ambulance            | _____        | _____                       |
| Security                            | _____        | _____                       |
| Environmental Coordinator           | _____        | _____                       |
| Public Works Officer (Cleanup Team) | _____        | _____                       |
| Hazmat Waste Manager                | _____        | _____                       |
| Disaster Preparedness               | _____        | _____                       |
| On-Scene Operations Team            | _____        | _____                       |
| Safety                              | _____        | _____                       |
| Transportation Unit                 | _____        | _____                       |
| Communication Unit                  | _____        | _____                       |
| Air Operations Unit                 | _____        | _____                       |
| Public Affairs                      | _____        | _____                       |
| Legal Advisor                       | _____        | _____                       |
| Planning Unit                       | _____        | _____                       |
| Facilities Unit                     | _____        | _____                       |
| Finance Unit                        | _____        | _____                       |

| 3. Actions: Unit(s)          | In Progress | Completed |
|------------------------------|-------------|-----------|
| Secure Source _____          | _____       | _____     |
| Evacuation _____             | _____       | _____     |
| First Aid _____              | _____       | _____     |
| Traffic Control _____        | _____       | _____     |
| Exposure/Monitoring _____    | _____       | _____     |
| Spill Controlled _____       | _____       | _____     |
| Extinguish _____             | _____       | _____     |
| Ventilation _____            | _____       | _____     |
| Containment _____            | _____       | _____     |
| Salvage _____                | _____       | _____     |
| Cleanup/Removal _____        | _____       | _____     |
| Electric _____               | _____       | _____     |
| Gas _____                    | _____       | _____     |
| Water _____                  | _____       | _____     |
| Other _____                  | _____       | _____     |
| Establish Command Post _____ | _____       | _____     |

**OIL/HAZARDOUS SUBSTANCE INCIDENT COMMANDER ACTIONS LOG SHEET  
(Navy On-Scene Command Responsibility)**

4. Additional Assistance Requested? Yes  No   
Base Disaster Preparedness Unit Yes  No   
Local Fire Departments Yes  No  Who? \_\_\_\_\_  
Local/State Police Yes  No   
Local Hospitals Yes  No   
Local Contractors Yes  No   
Naval On-scene Coordinator (NOSC) Yes  No

5. Recovery, Cleanup, Disposition

- Coordinate clean up with Federal and State agencies
- Obtain food and water for response personnel
- Obtain sanitary facilities within reasonable distance of site
- Document respiratory and/or skin reaction complaints
- Salvage operations
- Fire control
- Obtain samples for analysis

(4 pages)

**SPILL RESPONSE NOTIFICATION FORM**  
**National Response Center 1-800-424-8802**

**Note: It is not necessary to wait for all information before calling the NRC**

| SPILL RESPONSE NOTIFICATION FORM |  |
|----------------------------------|--|
| REPORTER INFORMATION             |  |
| Reporter's Name                  |  |
| Last                             |  |
| First                            |  |
| Reporter's Phone Number          |  |
| Company                          |  |
| Organization Type                |  |
| Position                         |  |
| Address                          | Street: NAF El Centro                                    |
|                                  | City: El Centro  |
|                                  | State: CA  |
|                                  | Zip Code: 92243-5001                                     |
| Were Materials Released          | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Confidential                     | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Time Call Received               | (use 24 hour time)                                       |
| Incident Report # issued by NRC  |  |

SPILL RESPONSE NOTIFICATION FORM

INCIDENT DESCRIPTION

|                                   |   |
|-----------------------------------|---|
| Source and/or Cause of Incident   |   |
|                                   |   |
|                                   |   |
|                                   |   |
| Date                              |   |
| Time of Incident                  | (use 24 hour time)  |
| Incident Address/Location         |   |
|                                   |   |
|                                   |   |
| Nearest City                      | El Centro   |
| County                            | Imperial County   |
| State                             | California  |
| Zip Code                          | 92243-5001  |
| Distance from City (miles)        | 7 miles NW  |
| Section                           |   |
| Township                          |   |
| Range                             |   |
| Container Type                    |   |
| Tank Capacity (include units)     |   |
| Facility Capacity (include units) |   |
| Facility Latitude                 | 32° 49' 00"   |
| Facility Longitude                | 115° 40' 00"  |
| Weather Conditions                |   |
|                                   |   |
|                                   |   |
| Material Released                 | CHRIS Code –  |
| <input type="checkbox"/> YES      | Quantity Released – (include units)   |
| <input type="checkbox"/> NO       | Material Released into Water – <input type="checkbox"/> YES <input type="checkbox"/> NO |
|                                   | Quantity Released into Water – (include units)  |

SPILL RESPONSE NOTIFICATION FORM

RESPONSE ACTIONS

Actions Taken to Correct Incident

Actions Taken to Control Incident

Actions Taken to Mitigate Incident

| SPILL RESPONSE NOTIFICATION FORM  |  |
|---|--|
| <b>IMPACT</b>   |  |
| Number of injuries  |  |
| Number of deaths  |  |
| Evacuation(s) Required  | <input type="checkbox"/> Yes <input type="checkbox"/> NO |
| Number Evacuated  |  |
| Was There Any Damage  | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Damage in Dollars (estimated)   |  |
| Medium Affected   |  |
| Description of Affect   |  |
|   |  |
|   |  |
|   |  |
| Additional Information about Medium   |  |
|   |  |
|   |  |
|   |  |
| Additional Information<br>Any information about the incident not recorded elsewhere in the report |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
| <b>CALLER NOTIFICATIONS</b>   |  |
| EPA   | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| USCG  | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| SERC  | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| LEPC  | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| NOSC  | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Other (List)  | <input type="checkbox"/> YES <input type="checkbox"/> NO |

## RESPONSE EQUIPMENT INSPECTION CHECKLIST AND LOG

|  |   |
|--|---|
| INVENTORY ITEM                                 |   |
| Quantity on-Hand:                              |   |
| Short-fall from Plan Quantity:                 | <input type="checkbox"/> Yes <span style="margin-left: 150px;"><input type="checkbox"/> No</span>   |
| Storage Location:                              |   |
| Accessibility:<br>[Time to Access and Respond] |   |
| Operational Status:                            | <input type="checkbox"/> Operational <span style="margin-left: 100px;"><input type="checkbox"/> Non-Operational</span>  |
| Condition:                                     | <input type="checkbox"/> Good <span style="margin-left: 100px;"><input type="checkbox"/> Fair</span> <span style="margin-left: 100px;"><input type="checkbox"/> Poor</span> |
| Use Status:                                    | Date of Last Use:<br><br>Date of Last Test:<br><br>Test Frequency:  |
| Required Inspection Frequency:                 |   |
| Shelf Life:                                    | Present age:<br><br>Expected Replacement Date:<br><br>Date Fuel Last Changed:   |
| Comments:                                      |   |
|  |   |
|  |   |
|  |   |
| Inspector:                                     | Name:   |
|  | Rank/Rate/Code  |
| Signature:                                     | Date of Inspection:   |

Note: Equipment must be inspected at least annually.

## **SPCC PROGRAM CHECKLISTS**

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**DISCHARGE PREVENTION MEETING LOGS**

DATE: |

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

| TOPIC              |    | DESCRIPTION |
|--------------------|----|-------------|
| SUBJECTS DISCUSSED | 1. |             |
|                    | 2. |             |
|                    | 3. |             |
|                    | 4. |             |
| ACTIONS REQUIRED   | 1. |             |
|                    | 2. |             |
|                    | 3. |             |
|                    | 4. |             |

IMPLEMENTATION DATE:

COMMENTS:

SIGNATURE OF RESPONSIBLE OFFICIAL:

DATE:

**SPCC AMENDMENT CHECKLIST**  
**(Parts A, B, C, D, E, and F)**

**PART A: SITE APPLICABILITY**

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

SPCC Site      Yes      No  
                         

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

| <b>Quantity of Oils, Fuels, and Lubricants Handled Onsite:</b>  |                          |                          |
|---|--------------------------|--------------------------|
|   | Yes                      | No                       |
| 1. Any single aboveground tank > 660 gallons?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. > 1,320 gallons stored in ASTs?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. > 42,000 gallons contained in USTs?  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>STOP!</b> If any response above was "yes," then proceed. If all responses above were "no," then exclude site from further SPCC consideration and mark "no" at the top of the page. |                          |                          |
| <b>Comments:</b><br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____   |                          |                          |

Completed by: \_\_\_\_\_ Reviewed by: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART B: GENERAL SITE DATA**

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Activity/function/service description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

No. of buried oil USTs: \_\_\_\_\_

Total estimated capacity: \_\_\_\_\_

No. of oil ASTs: \_\_\_\_\_

Total estimated capacity: \_\_\_\_\_

No. of 55-gallon oil drums: \_\_\_\_\_

No. of other containers: \_\_\_\_\_

Size range: \_\_\_\_\_

Total estimated quantity: \_\_\_\_\_

Warning to traffic of susceptible equipment?

Yes

No

Site secured?

If yes, how?

General site lighting?  
Adequate to detect spills

Yes

No

Scenario of largest single release possible:  
\_\_\_\_\_  
\_\_\_\_\_

Estimated Quantity: \_\_\_\_\_

Fate of spill:  
\_\_\_\_\_  
\_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART B. GENERAL SITE DATA (continued)**

Spill history in the last 12 months (obtain copies of reports):

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|                  | Yes                      | No                       |
|------------------|--------------------------|--------------------------|
| Spill Absorbent? | <input type="checkbox"/> | <input type="checkbox"/> |
| Type: _____      |                          |                          |
| Location: _____  |                          |                          |
| Quantity: _____  |                          |                          |

**SITE SKETCH**



**SPCC AMENDMENT CHECKLIST (continued)**

**PART B. GENERAL SITE DATA (continued)**

**TRAINING**

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**RECOMMENDATIONS**

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Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
Date: \_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART C. DRUMS AND OTHER CONTAINERS**

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

| No. of Containers | Container Size | Container Material | Container Contents |
|-------------------|----------------|--------------------|--------------------|
|                   |                |                    |                    |
|                   |                |                    |                    |
|                   |                |                    |                    |
|                   |                |                    |                    |
|                   |                |                    |                    |
|                   |                |                    |                    |

Condition of containers:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Evidence of past/present spill or leaks:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12-month spill history:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART C. DRUMS AND OTHER CONTAINERS (continued)**

|   |                                 |                                |
|---|---------------------------------|--------------------------------|
| Are drums and containers protected from the elements of nature?<br>If yes, how? _____<br>_____  | Yes<br><input type="checkbox"/> | No<br><input type="checkbox"/> |
| Is there secondary containment?<br>If yes, fill out "Control Equipment" form.<br>If no, take measurements of recommended containment. | Yes<br><input type="checkbox"/> | No<br><input type="checkbox"/> |
| <b>RECOMMENDATIONS</b><br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____   |                                 |                                |

Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
Date: \_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART D. TANK CHECKLIST**

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Tank I.D.: \_\_\_\_\_

Tank se/purpose: \_\_\_\_\_

Location: \_\_\_\_\_

Underground (buried)     Aboveground

Tank age: \_\_\_\_\_

Tank capacity: \_\_\_\_\_ gallons

Tank contents: \_\_\_\_\_

Materials of Tank Construction \_\_\_\_\_

Linings?     Yes     No

If yes, what type? \_\_\_\_\_

Coatings?     Yes     No

If yes, what type? \_\_\_\_\_

Dimensions: \_\_\_\_\_

Single wall     Double wall

Cathodic Protection (for buried tanks)?     Yes     No

Does the Tank Have the Following Associated Equipment?     Yes     No

Piping     Yes     No  
If yes, fill out "Associated Equipment" form

Pumps     Yes     No  
If yes, fill out "Associated Equipment" form

Valves     Yes     No  
If yes, fill out "Associated Equipment" form

**SPCC AMENDMENT CHECKLIST (continued)**

**PART D. TANK CHECKLIST (continued)**

Internal Heating Coils  Yes  No  
If yes, fill out "Associated Equipment" form

Fluid Level Indicators  Yes  No  
If yes, fill out "Associated Equipment" form

Secondary Containment  Yes  No  
If yes, fill out "Associated Equipment" form

Tank Condition/Inspection

Normal temperature of operation: \_\_\_\_\_ (°F, °C)

Normal pressure of operation: \_\_\_\_\_ (psi)

Visible corrosion?  Yes  No  
If yes, where and extent? \_\_\_\_\_  
\_\_\_\_\_

Past leaks/spills evident?  Yes  No

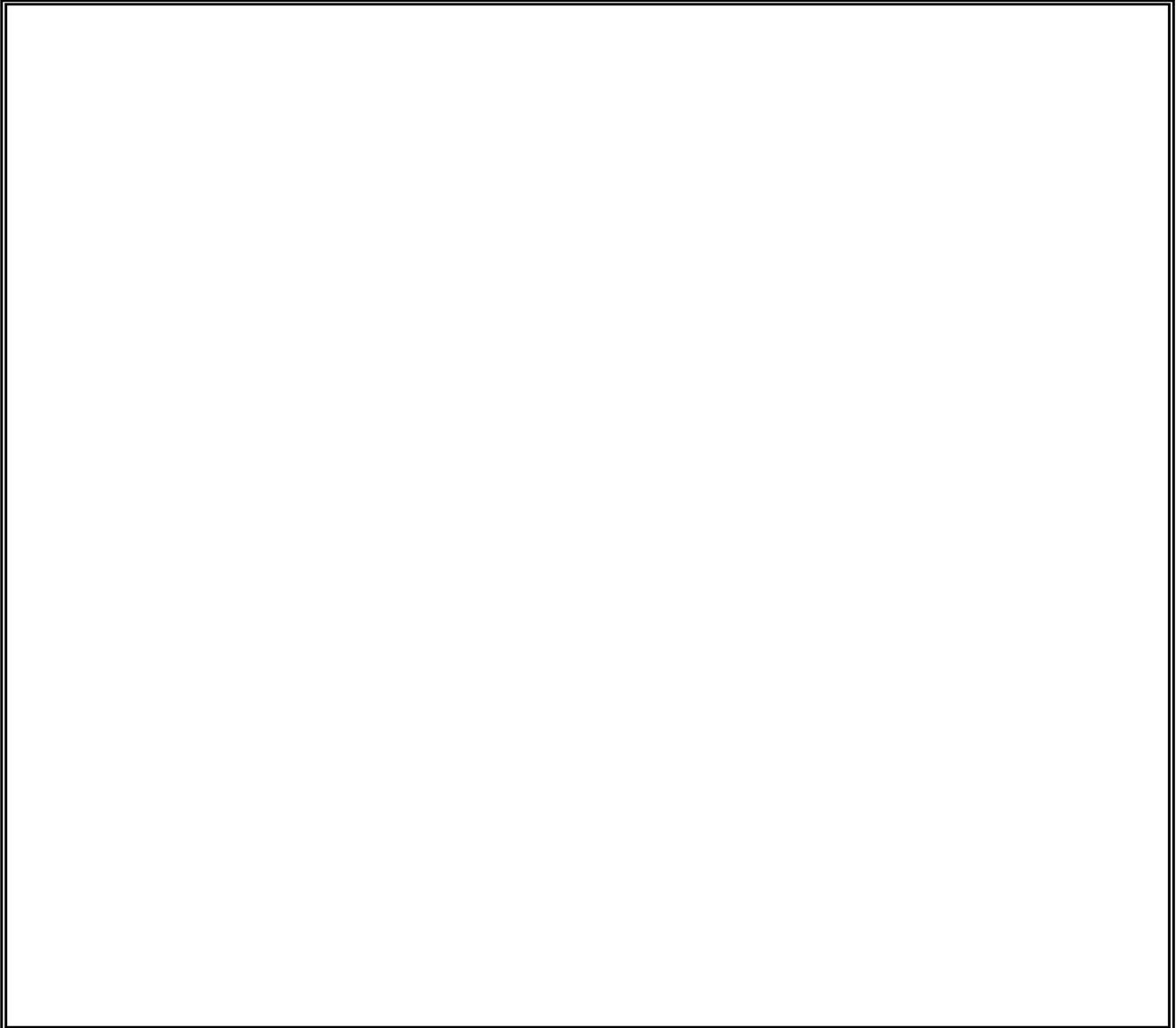
Tank inspection/test records maintained?  Yes  No  
If yes, date and type of test: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

|                        |
|------------------------|
| <b>RECOMMENDATIONS</b> |
|                        |
|                        |
|                        |
|                        |
|                        |

**SPCC AMENDMENT CHECKLIST (continued)**

**PART D. TANK CHECKLIST (continued)**

**SITE SKETCH**



Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
Date: \_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART E. CONTROL EQUIPMENT**

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Secondary Containment

Type:  berm/dike/curbing       culvert/gutter       booms/barriers       trench  
 sump       other: \_\_\_\_\_

Materials of construction: \_\_\_\_\_

Coatings?       Yes       No  
If yes, what  
type? \_\_\_\_\_

Leak detection?       Yes       No  
If yes, what  
type? \_\_\_\_\_

Capacity of secondary containment or  
dimensions: \_\_\_\_\_

Cracks/breeches?       Yes       No  
If yes,  
describe? \_\_\_\_\_

Drainage

Drainage restrained by valves?       Yes       No  
How is the structure drained?  
\_\_\_\_\_

Manually valved?       Yes       No      Inspected before draining       Yes       No

Drainage able to be diverted back to facility?       Yes       No

Fluid Level Indicators?       Yes       No  
High liquid-level alarm?       Yes       No  
If yes,  
describe: \_\_\_\_\_

**SPCC AMENDMENT CHECKLIST (continued)**

**PART E. CONTROL EQUIPMENT (continued)**

High level interlock?       Yes       No

If yes,  
describe: \_\_\_\_\_  
\_\_\_\_\_

Testing  
schedule: \_\_\_\_\_

Date last tested: \_\_\_\_\_

Other Control Equipment (including leak detection)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RECOMMENDATIONS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed by: \_\_\_\_\_

Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

Date: \_\_\_\_\_

SPCC AMENDMENT CHECKLIST (continued)

PART F. ASSOCIATED EQUIPMENT

Site/Bldg. ID: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Pipes

Identification (e.g., tank association, location): \_\_\_\_\_  
\_\_\_\_\_

Dimensions (length x diameter): \_\_\_\_\_  
\_\_\_\_\_

Materials of Construction: \_\_\_\_\_  
\_\_\_\_\_

Single       Double-wall

Susceptible to damage       Yes       No  
If yes,  
describe? \_\_\_\_\_

Capped/blinded when not in use?       Yes       No  
If yes,  
describe? \_\_\_\_\_

Inspection  
history \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Condition: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Secondary containment?       Yes       No  
If yes, fill out "Control Equipment" form.  
If no, take measurements for  
containment \_\_\_\_\_  
\_\_\_\_\_

Cathodic protection (if buried)?       Yes       No

**SPCC AMENDMENT CHECKLIST (continued)**

**PART F. ASSOCIATED EQUIPMENT (continued)**

Valves

Identification (e.g., tank association, location): \_\_\_\_\_

Materials of Construction: \_\_\_\_\_

Type of valve: \_\_\_\_\_

Automatic (A)       Manual (M)

Interlocked control?       Yes       No  
If yes, fill out "Control Equipment" form

Secondary Equipment?       Yes       No  
If yes, fill out "Control Equipment" form  
If no, take measurements for  
containment \_\_\_\_\_

Pumps

Identification (e.g., tank association, location): \_\_\_\_\_

Materials of Construction: \_\_\_\_\_

Type of pump: \_\_\_\_\_

Automatic (A)       Manual (M)

Interlocked control?       Yes       No  
If yes, fill out "Control Equipment" form

Secondary Equipment?       Yes       No  
If yes, fill out "Control Equipment" form  
If no, take measurements for  
containment \_\_\_\_\_

Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
Date: \_\_\_\_\_

## **SPCC INSPECTION SCHEDULE AND CHECKLISTS**

**OIL/HAZARDOUS SUBSTANCE STORAGE FACILITY INSPECTION**  
(1 page)

| ITEMS   | FREQUENCY |
|---|-----------|
| Tanks are not leaking.  | Daily     |
| Valves, pumps, piping, gages, etc. are not leaking.                                 | Daily     |
| Monitoring equipment is operational.  | Daily     |
| Spill containment is free of liquid.  | Daily     |
| Vents are unobstructed.   | Daily     |
| Water in tank.  | Weekly    |
| Exterior surfaces do not show signs of leakage.                                     | Monthly   |
| External coatings are not bubbled, cracked or damaged.                              | Monthly   |
| Tanks are not rusted, pitted, or deteriorated.                                      | Monthly   |
| Bolts, rivets, or seams are not damaged, cracked or rusted.                         | Monthly   |
| Welds are not cracked or non-uniform.   | Monthly   |
| Tank foundation has not eroded or settled.  | Monthly   |
| Tank supports are not deteriorated or buckled.                                      | Monthly   |
| Water seal between tank bottom and foundation is not damaged or leaking.            | Monthly   |
| Tank insulation is not damaged, or swelling.  | Monthly   |
| Cathodic protection system is operable.   | Monthly   |
| Dielectric bushings are functional.   | Monthly   |
| Leak detection system is operational.   | Monthly   |
| Overfill protection float valve is properly positioned.                             | Monthly   |
| Vents and pressure release devices are not obstructed.                              | Monthly   |
| Tank bottoms have not accumulated rust, scale, microorganisms, or foreign material. | Monthly   |
| External stairways and walkways on aboveground tanks are sound and unobstructed.    | Monthly   |
| Water drains on aboveground tank roofs are not blocked or corroded.                 | Monthly   |
| Tank integrity testing or leak detection - USTs (tracer type test)                  | Annually  |
| Tank integrity testing - ASTs (tracer type test)                                    | Annually  |
| Tank internal visual inspection and cleaning (tanks over 1000 gallons).             | 3-5 years |

Note: Refer to 40 CFR 112.7(e)(2)(vi)

**OIL/HAZARDOUS SUBSTANCE TRANSFER PIPING INSPECTION CHECKLIST**  
(1 page)

| ITEMS   | FREQUENCY |
|---|-----------|
| Pipelines are not leaking or damaged.   | Daily     |
| Valves are not leaking or damaged.  | Daily     |
| Expansion joints are not leaking.   | Daily     |
| Pipe fittings are not leaking, corroded or damaged.                                       | Daily     |
| No nuts, bolts, or other parts are missing.   | Daily     |
| All nuts and bolts are tight.   | Daily     |
| Pipes do not vibrate excessively.   | Daily     |
| Valves seals and gaskets are not leaking or deteriorated.                                 | Weekly    |
| Relief valves, expansion joints, or pipe fittings are not leaking or damaged.             | Weekly    |
| Pipelines are not misaligned.   | Weekly    |
| Pipes are not sagging.  | Weekly    |
| Pipeline supports are not structurally weak, damaged, or deteriorated.                    | Weekly    |
| Pipeline contact points are not worn.   | Weekly    |
| Pipelines and valves are properly labeled and marked.                                     | Weekly    |
| Pipelines and valve labels are legible.   | Weekly    |
| Pipeline right-of-ways do not show signs of leaks or pipe damage.                         | Weekly    |
| Pipelines are not corroded or rusted.   | Monthly   |
| External coatings are not chipped, cracked, or peeling.                                   | Monthly   |
| Anode in cathodic protection system is not consumed.                                      | Monthly   |
| Cathodic protection lead wires are not broken or deteriorated.                            | Monthly   |
| Cathodic protection is adequate as determined through soil potential measurements.        | Monthly   |
| Test pipeline pressure.   | Annually  |
| Integrity Testing - Aboveground (Hydrotest)   | Annually  |
| Integrity Testing - Underground (Hydrotest)   | Annually  |
| Test relief valve pressure.   | Annually  |
| Calibrate relief valves, if necessary.  | Annually  |
| Valves open and close properly.   | Annually  |
| Pipeline metal thickness is within acceptable limits; (spot-check underground pipelines). | Annually  |
| Valve actuators operable.   | Annually  |
| Cathodic protection system is operable.   | Annually  |
| Slug shutoff valves are functional.   | Annually  |
| Flammable arresters are not clogged or damaged.   | Annually  |
| Underwater pipelines are not cracked, broken or otherwise damaged.                        | Annually  |

**LOADING/UNLOADING FACILITY INSPECTION CHECKLIST**  
(1 page)

| ITEM   | FREQUENCY |
|--|-----------|
| Hoses are free from damage such as cuts, gouges, tears, abrasions, bulges, blisters, kinks, or cracks. | Daily     |
| Inspect nipples for signs of slippage, cracks, or other defects.                                       | Daily     |
| Flanges do not show signs of slippage, cracks, or other defects.                                       | Daily     |
| Swivel joints do not show signs of slippage, cracks, or other defects.                                 | Daily     |
| Valves do not show signs of slippage, cracks, or other defects.  | Daily     |
| Couplings do not show signs of slippage, cracks, or other defects.                                     | Daily     |
| Junction and pull box covers for electrical equipment are secure.                                      | Daily     |
| Containment areas are free of liquid accumulations.  | Daily     |
| Inspect hoses for signs of internal deterioration (cuts, tears, blisters, etc.)                        | Monthly   |
| Electrical grounds, clamps or connections are not loose or corroded.                                   | Monthly   |
| Bonding connections are not loose or corroded.   | Monthly   |
| Grounding connections are not loose or corroded.   | Monthly   |
| Bolted connections are not loose.  | Monthly   |
| Clamps on portable equipment are not loose or deteriorated.  | Monthly   |
| Early warning departure systems are operable.  | Monthly   |
| Spill containment structures do not have holes, cracks, or leaks.                                      | Monthly   |
| Remote operating equipment is operable.  | Quarterly |
| Indicating equipment operates satisfactorily.  | Quarterly |
| Resistance of grounding systems is within acceptable limits.   | Quarterly |
| Resistance of grounding systems is within acceptable limits.   | Quarterly |
| Arcing devices such as relays are protected with conduit seals.  | Quarterly |
| Sealing compound in conduit seals is not cracked or deteriorated.                                      | Quarterly |
| Valves and valve operators are functional.   | Quarterly |
| Strainer covers do not leak or show signs of deterioration.  | Quarterly |
| Pump packings do not leak or show signs of deterioration.  | Quarterly |
| Leakage is not visible around valve stems.   | Quarterly |
| Valve packing material is not worn or deteriorated.  | Quarterly |
| Valve bonnet or flange bolts are loose.  | Quarterly |
| Valve body walls are not thin, pitted, or cracked.   | Quarterly |
| Valve seats are snug when valve is closed.   | Quarterly |
| Pressure test hoses.   | Annually  |
| Test pressure gauges.  | Annually  |
| Inspect and test vapor emission control system.  | Annually  |

**SPILL CONTAINMENT SYSTEM INSPECTION CHECKLIST**  
(1 page)

| ITEM   | FREQUENCY |
|--|-----------|
| Containment areas are free of spilled substances.  | Daily     |
| Rainwater has not accumulated in containment areas.  | Daily     |
| Inspect areas adjacent to containment areas for liquid accumulations.                          | Daily     |
| Inspect loading and unloading areas for liquid accumulations.                                  | Daily     |
| Tanks or pipelines are not visibly leaking.  | Daily     |
| Valves are not leaking or dripping.  | Daily     |
| Containment area discharge valves are closed.  | Daily     |
| Ramps or other structures associated with spill control are not damaged or cracked.            | Weekly    |
| Containment dikes do not have holes, cracks or other breaches that could result in leaks.      | Weekly    |
| Containment curbing does not have holes, cracks, or other breaches that could result in leaks. | Weekly    |
| Drainage swales and structures are not clogged and do not have accumulated debris.             | Weekly    |
| Spill response equipment is available and in working order.                                    | Weekly    |
| Personnel protective equipment is available for use during emergencies.                        | Weekly    |
| Communications equipment is operable.  | Weekly    |

**OIL/HAZARDOUS SUBSTANCE CONTAINER STORAGE FACILITY INSPECTION CHECKLIST  
(1 page)**

| ITEM   | FREQUENCY |
|--|-----------|
| Containers and work areas are maintained neatly.   | Daily     |
| Equipment is stored in designated areas.   | Daily     |
| Floors are free of tripping hazards.   | Daily     |
| Storage and containment areas are free of liquid accumulations.                              | Daily     |
| Containers are stored with closed lids and bung holes.                                       | Daily     |
| Containers are not leaking or rusted and do not show signs of deterioration.                 | Weekly    |
| Containers are not standing in accumulated liquid.   | Weekly    |
| Containers are protected from precipitation.   | Weekly    |
| Containers are labeled.  | Weekly    |
| Container labels are legible.  | Weekly    |
| Pumps, hoses, and other transfer equipment are not leaking or deteriorated.                  | Weekly    |
| Grounding systems are not corroded or loose.   | Weekly    |
| Bonding systems are not corroded or loose.   | Weekly    |
| Container storage areas are roofed and are not exposed to weathering or corrosion.           | Quarterly |
| Working surfaces are tidy.   | Quarterly |
| Cabinets, racks, lockers, and pallets are properly used.                                     | Quarterly |
| Storage equipment is not damaged or corroded.  | Quarterly |
| Pumps or hoses are not leaking.  | Quarterly |
| Drum spigots and bungs are not leaking.  | Quarterly |
| Drip pans are used in areas subject to spills outside containment structures.                | Quarterly |
| Drip pans are present under parts of drums that extend beyond containment structures.        | Quarterly |
| Drip pans are adequate to contain potential spills and leaks.                                | Quarterly |
| Spill containment structures do not have holes, cracks, or other potential sources of leaks. | Quarterly |
| Ventilation systems are operable.  | Quarterly |
| Lighting systems are adequate and have no missing, broken, or burnt-out globes.              | Quarterly |
| Container handling equipment is not broken or damaged.                                       | Quarterly |







