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MINUTES FOR RESTORATION ADVISORY BOARD MEETING HELD 4 JUNE 1996 NS  
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6/4/1996  
NAVAL STATION MAYPORT

NAVSTA MAYPORT  
RESTORATION ADVISORY BOARD

MINUTES  
June 4, 1996

NAVSTA Mayport Administrative Record  
Document Index Number

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**MEMBERS PRESENT**

Martha Berry, USEPA  
Jim Cason, FDEP  
David Driggers, SOUTHNAVFACENGCOM  
Cheryl Mitchell, Navy Co-Chair  
Bob Weiss, Community Co-Chair  
Jay Carver  
Edwin Cordes  
Paul Perez (Late Arrival)

**MEMBERS ABSENT**

Patricia Lauderdale

**I. CALL TO ORDER:** The meeting was called to order at 6:35 p.m.

**II. APPROVAL OF MEETING MINUTES:** There were no minutes from the previous March 21, 1996 meeting because we were preparing for the Availability Session and reviewing poster displays.

**III. GENERAL BUSINESS:** The NAVSTA Mayport *Community Relations Plan* was discussed and a handout explaining what the document is and how the RAB plays a part was provided to members. During this discussion we also solicited ideas for advertising the meetings and basically everyone agreed that the newspaper ads were not worth the effort. The post cards seemed to get everyone's approval and we could add more information on the topics of the meeting so people would know what we were discussing. The RAB members will be interviewed by Ashley Power of ABB-ES. I solicited names of people that the RAB members thought would be good sources for interviews and requested they bring any names to the interview which will be set-up at a later date. Mr. Weiss had suggested the possibility of acquiring a professional "pollster" to survey the community and see what environmental concerns were raised.

The report on the *RCRA Facility Investigation (RFI) for Group III Solid Waste Management Units* was presented and a "Report Summary" was handed-out to members. I will be getting copies of the 2 volume report for Mr. Carver and Mr. Cordes. Please review and we can discuss any questions at a later meeting.

**IV. DATE SCHEDULED FOR NEXT MEETING** The next regularly scheduled RAB meeting is September 10 at 6:30 p.m. in the Atlantic Beach City Hall Council Chambers at 800 Seminole Road.

**V. ADJOURNMENT** The meeting was adjourned at 7:45 p.m.

An Overview of the  
***RCRA Facility Investigation (RFI)***  
***Group III Solid Waste Management Units***

June 4, 1996

**What is the purpose of a RCRA  
Facility Investigation (RFI)?**

- An RFI is conducted to:
  - determine the nature, extent, and fate of environmental releases
  - provide information to conduct a human health and ecological risk assessment
  - recommend corrective measures, if required, for solid waste management units (SWMUs) evaluated in the RFI

**How will the RFI be used?**

- The RFI represents the second step in the cleanup process.
- The report identifies SWMUs needing cleanup, which is assessed in a corrective measures study (CMS).
- Interim measures may also be suggested in the RFI. Interim measures are smaller, short-term cleanups aimed at specific issues.

#### SWMUs 1, 23, 24, 25, 44, and 45: Release Characteristics

- **Soil:** Release data indicate hotspots of SVOCs, pesticides, and metals in the soil. Results suggest that there has **not** been a significant release of hazardous materials.
- **Groundwater:** 7 inorganic compounds, 1 SVOC and 1 VOC were found in groundwater samples exceeding benchmark levels. Results for inorganic compounds suggest that a release affecting groundwater has occurred in the shipyard area.

#### SWMUs 1, 23, 24, 25, 44, and 45: Risk Assessment

- There is **no** human health risk associated with *current* land use. Risk associated with groundwater for a hypothetical residential *future* land use scenario was identified and attributed to arsenic, manganese, and 1,1-dichloroethane.
- Iron and cyanide in groundwater will be naturally diluted when discharged into the St. John's River and are **not** expected to pose a risk for ecological receptors.

#### SWMUs 1, 23, 24, 25, 44, and 45: Recommendations

- **No further investigation** is recommended for SWMUs in the industrial shipyard and wastewater treatment area.
- An *Interim Measure* is suggested to removed localized hotspots in the soil.
- An ecological risk assessment should be conducted on for soil exposure if the site changes from an industrial to residential use.

### SWMUs 14 and 18 Release Characteristics

- **Soil:** Results suggest that there has **not** been a significant release of hazardous materials.
- **Sediment:** SVOCs and pesticides were detected in a drainage ditch associated with SWMU 14. However, results suggest that there has **not** been a significant release of hazardous materials
- **Groundwater:** 4 inorganic compounds were found in groundwater samples exceeding benchmark levels. Concentrations appear in a random pattern and are likely **not** site-related.

### SWMUs 14 and 18 Risk Assessment

- There is **no** human health risk associated with *current or future* land use of SWMUs 14 and 18.
- PAHs and pesticides were detected in sediments in the drainage ditch exceeding Florida guidelines. There is no ecological risk because the ditch contain water intermittently and is **not** considered a habitat.
- Iron in groundwater naturally discharging into the St. Johns River is **not** expected to pose a risk for aquatic receptors.

### SWMUs 14 and 18: Recommendations

- **No further investigation** is recommended for SWMUs in the industrial shipyard and wastewater treatment area.
- An *Interim Measure* is suggested to removed localized hotspots in the sediment in the ditches at SWMU 14.
- Additional soil sampling should be conducted beneath the aircraft mockups and concrete detention basin when fire fighting training activities are discontinued.

## SWMU 17

### Release Characteristics

- **Soil:** 2 organic analytes were detected, but did not exceed FDEP industrial cleanup levels; their presence is likely the result of exhaust and engine fluids of cars in the parking lot.
- **Groundwater:** Arsenic, iron, and manganese were detected exceeding USEPA benchmark. These samples were upgradient or crossgradient from the site and are likely not associated with SWMU 17. Bis(2-ethylhexyl)phthalate was also detected in a single sample, but is likely a lab contaminant.

## SWMU 17

### Risk Assessment

- There is no human health risk associated with *current* land use. Risk is associated with benzo(a)pyrene, dibenz(a,h)anthracene, arsenic, beryllium in the soil and bis(2-ethylhexyl) phthalate in the groundwater for a hypothetical residential *future* land use scenario.
- Iron in groundwater naturally discharging into the St. Johns River is not expected to pose a risk for ecological receptors.

## SWMU 17

### Recommendations

- **No further investigation** is recommended for SWMUs in the industrial shipyard and wastewater treatment area.

## Summary

- No further investigation is currently recommended for Group III SWMUs.
- The Master Plan for NAVSTA Mayport should be amended to *prohibit* residential development at Group III sites and *prohibit* the use of groundwater at these sites as drinking water.

## Summary

- Potential *Interim Measure* include:
  - removing hotspots in the soil at the industrial area (SWMUs 1, 23, 24, 25, 44, and 45)
  - removing hotspots in the surface soil and sediment in the drainage ditches at SWMU 14
  - performing an ecological risk assessment at the industrial area should the land use patterns change
  - additional soil sampling at SWMU 14 when fire fighting exercises are discontinued

## ***Report Summary***

### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY INVESTIGATION (RFI) REPORT GROUP III SOLID WASTE MANAGEMENT UNITS (SWMUs)**

The Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report documents the activities, findings, conclusions, and recommendations developed for Group III Solid Waste Management Units (SWMUs). RFI activities conducted at Group III SWMUs provide data to:

- determine the *nature and extent* of contaminant releases from the SWMUs;
- characterize the *potential pathways* of contaminant migration in the soil, surface water, and groundwater;
- identify *potential receptors*;
- assess *potential risks* to human health and the environment; and
- determine whether or not contaminants released from a SWMU require *corrective measures* to mitigate the risk to human health or the environment.

SWMUs evaluated as part of Group III (Figure 1) are:

SWMU 1: Landfill A  
SWMU 14: Mercury/Oil Waste Spill Area  
SWMU 17: Carbonaceous Fuel Boiler  
SWMU 18: Fleet Training Center (FTC) Diesel Generator Sump  
SWMU 23: Jacksonville Shipyard, Inc. (JSI)  
SWMU 24: North Florida Shipyard, Inc. (NFSI)  
SWMU 25: Atlantic Marine, Inc. (AMI)  
SWMU 44: Wastewater Treatment Facility Clarifiers 1, 2 and 3  
SWMU 45: Wastewater Treatment Facility Sludge Drying Beds

Full descriptions and histories of the SWMUs are provided in this Report Summary.

Figure 1

SWMUs 1, 23, 24, 25, 44, and 45 were evaluated as one area because they are contiguous sites associated with the industrial shipyard area (SWMUs 1, 23, 24, and 25) and the wastewater treatment plant (SWMUs 44 and 45).

SWMUs 14 and 18 were evaluated together because they share a similar topographic and hydrogeologic setting, and similar contaminants.

SWMU 17 was evaluated singularly, because it was not located near other Group III SWMUs.

Field activities occurring at the Group III SWMUs during 1995 included:

- monitoring well and piezometer installation;
- topographic and geophysical surveys;
- testing of aquifer properties at selected monitoring wells and piezometers;
- tidal studies;
- groundwater screening, sampling, and elevation measurements;
- biological inventory of terrestrial and aquatic habitats; and,
- laboratory analyses of selected Appendix IX groundwater monitoring list compounds

All environmental samples collected during the field activities were analyzed for volatile and semivolatile organic compounds, pesticides, PCBs, metals, and cyanide. Environmental samples were collected from surface soil, subsurface soil, groundwater, sludge, surface water, and sediment.

After the environmental samples were analyzed, they were validated following USEPA and Navy guidelines. Upon completion of the validation, the data were evaluated for precision, accuracy, representativeness, comparability, and completeness (PARCCs).

The geologic setting of NAVSTA Mayport and other physical characteristics are described in detail in the Group III RFI Report including analyses of geology, hydrogeology, tidal influences, and physical characteristics of soil.

## **SITE DESCRIPTIONS AND HISTORY**

### **➤ Landfill A (SWMU 1)**

SWMU 1 was located near the JSI Administration Building off Bon Homme Richard Avenue. The landfill was used from 1942 to 1960 to store industrial and sanitary wastes, including waste oils, paints, solvents, garbage, and construction rubble. The landfill consisted of a series of trenches approximately 400 feet long, 15 feet wide, and 12 feet deep. These trenches were filled with waste and flammable material that was periodically burned. When the trenches reached capacity, they were covered with soil.

### **➤ Mercury/Oily Waste Spill (SWMU 14)**

SWMU 14 is located at the Fleet Training Center (FTC) Fire Fighting Training Area (FFTA) in the northeast part of NAVSTA Mayport near the St. John's River. The FFTA was constructed in 1964 and has undergone several modifications since that time. Associated with SWMU 14 are an extensive system of drains, tanks, and a detention pond built to prevent releases of water containing oily waste to the environment. Flammable liquids, such as diesel fuel and gasoline, are used at the FFTA to simulate fires on ships, helicopters, and planes. SWMU 14 is an area at the FFTA where oily waste from training exercises was inadvertently released. Additionally, early reports suggest that mercuric nitrate was stored at the site and may have been released.

### **➤ Carbonaceous Fuel Boiler (SWMU 17)**

SWMU 17, the Carbonaceous Fuel Boiler, is located in the northern part of NAVSTA Mayport, south of the Mayport Turning Basin and 350 feet west of Echo pier. From 1979 to 1994 the area was used to produce steam for ships berthed in the basin. The complex contained a furnace, waste bins, and underground storage tanks to store waste oil and diesel fuel. Approximately 42 tons of domestic solid waste and fuels were burned daily in the furnace. The facility had an air emissions permit and disposed of ash in an off-site landfill.

### **➤ Fleet Training Center (FTC) Diesel Generator Sump (SWMU 18)**

SWMU 18, the Fleet Training Center Diesel Generator Sump, is located in the northeastern part of NAVSTA Mayport, south of the St. Johns River at the southeastern edge of the Fleet Training Center at the base of the radio tower. Since 1982, an electric generator, located within the sump, has been operated by a contractor. This uncovered sump, approximately 5 feet long and 10 feet wide, collects oil or diesel fuel leaking from the electric generator, as well as stormwater runoff.

➤ **Jacksonville Shipyard, Inc. (JSI) (SWMU 23)**

SWMU 23 (4 acres) was located 400 feet east of the Mayport Turning Basin, off Bon Homme Richard Avenue. JSI was a commercial shipyard that leased shipyard property at NAVSTA Mayport and worked under contract to the Navy maintaining and repairing ships. JSI was at this location from 1961 to 1992, but has since gone out of business. Some of the buildings associated with shipyard activities have been demolished. A wide variety of maintenance and repair activities were performed at this site that could have resulted in a release to the environment.

➤ **North Florida Shipyard, Inc. (NFSI) SWMU 24)**

SWMU 24 (1½ acres) is located along the southern boundary of JSI. Like JSI, NFSI is a shipyard under contract to the Navy. Since 1982 NFSI has leased property from NAVSTA Mayport on which it performs maintenance and repair to ships. Also like JSI, NFSI, on a smaller scale, performs a wide variety of maintenance and repair activities at this site that could result in a release to the environment.

➤ **Atlantic Marine, Inc. (AMI) (SWMU 25)**

SWMU 25 (1½ acres) is located along the southern boundary of JSI and west of NFSI. Like JSI and NFSI, AMI is a shipyard under contract to the Navy. Since 1980 AMI has leased property from NAVSTA Mayport on which it performs maintenance and repair to ships. Like NFSI, AMI is smaller than JSI, yet performs a wide variety of maintenance and repair activities at this site that could result in a release to the environment.

➤ **Waste Treatment Facility Clarifiers 1, 2 and 3 (SWMU 44)**

SWMU 44 consists of three clarifiers located east of the Mayport Turning Basin along the northern boundary of JSI. These clarifiers are aboveground square tanks with a capacity of 40,500 gallons. Clarifiers 1 and 2 were built in 1962, Clarifier 3 was built in 1987. At one time the clarifiers were used to contain firefighting training waste liquid, and floating free-phase oil was manually skimmed from the liquid surface. Currently they are used to temporarily store firefighting training waste liquid before it is treated at the Oily Waste Treatment Plant.

➤ **Waste Treatment Facility Sludge Drying Beds (SWMU 45)**

The wastewater treatment facility at NAVSTA Mayport was expanded in 1972 to include activated sludge beds as part of the wastewater treatment. Two beds were constructed, each with four cells, and a total capacity of 14,000 square feet each. When operating, sludge was removed from the drying beds quarterly and disposed of in a landfill on base. The sludge drying beds have not been used for dewatering since 1985; they have been used intermittently as temporary storage area since 1985.

## RESULTS OF RCRA FACILITY INVESTIGATION (RFI)

The RCRA Facility Investigation (RFI) for Group III SWMUs was conducted to assess possible releases to the environment from each SWMU and whether or not the release presents a threat to human or ecological receptors. The RFI report for Group III SWMUs was separated into three chapters:

- SWMUs 1, 23, 24, 25, 44, and 45
- SWMUs 14 and 18
- SWMU 17

Each SWMU grouping is discussed separately in this section, and subsections address release characteristics, the human health risk assessment, and the ecological risk assessment. The release characteristics subsection for each area compares concentrations of detected chemicals to applicable human health or ecological based screening (benchmark) concentrations. Benchmark concentrations are risk-based concentrations and Florida standards, used to assess whether or not a chemical is present at a concentration that represents a threat to human or ecological receptors. Exceeding a benchmark concentration does not necessarily indicate that human health or ecological risk exists. Site-specific risks are calculated in the human health and ecological risk assessments for each of the three site groupings.

### SWMUs 1, 23, 24, 25, 44, and 45:

#### Industrial Shipyard Area and Wastewater Treatment Plant

##### ➤ **Release Characteristics**

**Soil:** Review of data collected for the RFI suggests that small areas or "hotspots" of semivolatile organic compounds (SVOCs), pesticides, and metals are present in the shipyard surface soil. Interpretation of the surface soil analytical data suggests that there has not been a significant release of hazardous chemicals to the environment. Some of the chemicals detected in the surface soil may also be attributable to use of dredging material to construct the land surface at NAVSTA Mayport.

**Groundwater:** One volatile organic compound (VOC): 1,1-dichloroethene, one SVOC: bis(2-ethylhexyl)phthalate and seven inorganic analytes: antimony, arsenic, iron, magnesium, manganese, sodium, and vanadium were detected at concentrations that exceed benchmarks for screening groundwater. Six inorganic analytes: antimony, vanadium, copper, lead, nickel and possibly manganese were present in groundwater samples at concentrations suggesting that a release has occurred affecting the groundwater under the shipyard area. Results of groundwater quality test in the Shipyard area indicate that the sites do not meet the criteria of Class G-I or G-II drinking water supplies. An appropriate designation would be Class G-III.

➤ **Human Health Risk Assessment (HHRA)**

The HHRA evaluated surface soil, sludge and groundwater (unfiltered) associated with the shipyard area. Cancer and non-cancer risks associated with current land use scenarios did not exceed USEPA criteria for excess lifetime cancer risk or noncancer risk.

For hypothetical future land use, the cancer risk associated with unfiltered groundwater exceeds the USEPA acceptable lifetime excess cancer risk range and FDEP's target cancer risk. The excess lifetime cancer risk is attributable to arsenic and 1,1-dichloroethane. The cancer slope factor for arsenic may result in an overestimate of cancer risk. USEPA risk management guidance suggests that cancer risk may be up to 10-fold lower than predicted.

The non-cancer risk associated with potential future domestic use of groundwater from the industrial area exceeds the USEPA target. Manganese and arsenic are the major contributors to this risk. *It must be noted that there is no current exposure to groundwater under the current land use at the site.*

➤ **Ecological Risk Assessment**

Potential risks for aquatic receptors were evaluated for exposures to chemicals in groundwater as they discharge to the St. Johns River. Comparison of the average and maximum exposure concentrations of each chemical with available criteria and toxicity benchmarks is the basis of the risk characterization.

Groundwater: Concentrations of cyanide and iron exceed the lowest toxicity benchmark concentrations. Potential exposure to these chemicals by benthic or aquatic organisms assumes that the concentration of these chemicals in groundwater is diluted (natural decrease in chemical concentration through advection, dispersion, mixing and retardation) before it is discharged to the St. Johns River. The ecological risk assessment evaluation suggests that there is no risk posed to aquatic animals from groundwater under the industrial area discharged to the St. John's River.

## SWMUs 14 and 18: Mercury/Oil Waste Spill and Fleet Training Center (FTC) Diesel Generator Sump

### ➤ **Release Characteristics**

Review of data collected for the RFI suggest that SVOCs, pesticides and inorganic chemicals are present in the surface soil, sediment, and groundwater around the FTC area. However, none of the chemicals were detected in surface soil samples at concentrations exceeding USEPA and FDEP industrial soil cleanup goals.

Soil: The assessment of soil sample analytical results suggest that there has not been a significant release of hazardous chemicals. Some of the chemicals detected in the surface soil may also be attributable to use of dredging material to construct the land surface at NAVSTA Mayport. *It should be noted that surface and subsurface soil samples were not collected beneath the aircraft mockups and concrete detention basin because they were in use.*

Sediment: SVOCs and pesticides were detected in sediment samples collected from a drainage ditch that in the past received runoff from SWMU 14 and currently receives runoff from building and parking areas. The concentrations detected exceeded benchmarks established by NOAA and FDEP. It is suspected that the SVOCs detected in sediment samples are the result of either past or current runoff from SWMU 14 and nearby parking lots. The pesticides are likely from the historic application in the vicinity of the site.

Groundwater: Four inorganic analytes: antimony, arsenic, iron, and manganese were detected in groundwater samples at concentration exceeding benchmarks. However, the chemicals and concentrations appear to be in a random pattern and are likely not site related. Results of water quality test in the vicinity of the SWMUs 14 and 18 indicate the sites meet the criteria of a Class G-I or G-II drinking water supply.

### ➤ **Human Health Risk Assessment (HHRA)**

The HHRA evaluated surface soil, sediment, and unfiltered groundwater associated with SWMUs 14 and 18. The excess lifetime cancer risk for current and hypothetical future land use associated with these environmental media do not exceed the USEPA acceptable cancer risk range. Excess lifetime cancer risk for surface soil slightly exceed or equal FDEP's target risk value for current and hypothetical future land use. FDEP's target risk value is also exceeded under evaluation of groundwater for hypothetical future use. *It must be noted that there is no current exposure to groundwater under the current land use at the site.*

Non-cancer risk associated with current and hypothetical future land use also do not exceed the USEPA or FDEP target risk for any of the evaluated pathways.

### ➤ **Ecological Risk Assessment**

Potential risks for terrestrial and aquatic receptors were evaluated for exposures to chemicals detected in surface water and sediment samples collected from the drainage ditches at the site, and groundwater as it discharges to the St. Johns River. Comparison of the average and maximum exposure concentrations of each chemical with available criteria and toxicity benchmarks is the basis of the risk characterization.

Sediment: Polyaromatic hydrocarbons (PAHs) were detected in sediment samples at concentrations exceeding the State of Florida Sediment Quality Assessment Guidelines. These guidelines establish screening levels for contaminants in sediment. Two pesticides: 4,4'-DDT and dieldrin were detected at single sampling locations in concentrations exceeding the State of Florida threshold levels. According the Florida guidelines, concentration of chemicals greater than the probable effect level, or PEL are usually or always associated with adverse biological effects and are considered to represent a hazard to aquatic organisms. Concentrations of PAHs and 4,4'-DDT exceeded the PEL in sediment samples taken from the drainage ditch. However, there is no perceived risk to ecological receptors because the SWMU 14 drainage ditches contain water only intermittently and are not considered ecological habitats.

Groundwater: Exposure point concentrations of iron in groundwater exceed toxicity benchmark values. However, the concentrations of iron are less than the maximum concentration detected in groundwater background samples. Therefore the discharge of iron in groundwater to the St. Johns River at concentrations similar to those detected at the site would not likely result in an increased risk to aquatic receptors.

## **SWMU 17: Carbonaceous Fuel Boiler**

### ➤ **Release Characteristics**

Review of the data collected for the RFI suggest that organic and inorganic analytes are present in surface soil and groundwater at SWMU 17.

Soil: Two organic analytes: benzo(a)pyrene and dibenz(a,h)anthracene, and two inorganic analytes: arsenic and beryllium, were detected in surface soil samples at concentrations exceeding benchmarks for residential exposure scenarios, but did not exceed the FDEP industrial soil cleanup goal. A likely source for benzo(a)pyrene and dibenz(a,h)anthracene that were detected in surface soil samples is residues from vehicle exhaust and/or engine fluids on the parking lot of the Carbonaceous Fuel Boiler.

**Groundwater:** One SVOC: bis(2-ethylhexyl)phthalate was detected in a groundwater sample that exceeded its respective benchmarks. This chemical is a common field and laboratory contaminant and is unlikely to be from a release at SWMU 17. Arsenic, iron, and manganese were detected at concentrations exceeding USEPA benchmarks. The highest concentrations detected were in groundwater samples collected from monitoring wells located hydraulically upgradient or crossgradient from SWMU 17, therefore, it is possible that detected concentrations of inorganics are not attributable to SWMU 17.

Results of water quality tests suggest that groundwater in the vicinity of the Carbonaceous Fuel Boiler meets the criteria of a Class G-I or G-II drinking water supply.

➤ **Human Health Risk Assessment (HHRA)**

The HHRA evaluated surface soil and unfiltered groundwater at SWMU 17. Under current land use scenarios, the cancer and non-cancer risks associated with surface soil and groundwater (unfiltered) do not exceed the USEPA acceptable risk range.

The excess lifetime cancer risk for hypothetical future land use, associated with surface soil and groundwater, exceeds the FDEP target. This risk is associated with benzo(a)pyrene, dibenz(a,h)anthracene, arsenic, and beryllium in the surface soil, and bis(2-ethylhexyl) phthalate in the groundwater.

Noncancer risk for surface soil and groundwater exposure pathways for current and future land use are below USEPA's and FDEP's target value.

➤ **Ecological Risk Assessment**

Potential risks for aquatic receptors were evaluated for exposures to chemicals in groundwater as it discharges to the St. Johns River. Comparison of the average and maximum exposure concentrations of each chemical with available criteria and toxicity benchmarks is the basis of the risk characterization.

**Groundwater:** Exposure point concentrations of iron in groundwater exceed toxicity benchmark values. However, the concentrations of iron are less than the maximum concentration detected in groundwater background samples. Therefore the discharge of iron in groundwater to the St. Johns River at concentrations similar to those detected at the site would not likely result in an increased risk to aquatic receptors.

## **RECOMMENDATIONS**

### **> SWMUs 1, 23, 24, 25, 44, and 45**

**Additional investigation under an RFI or a corrective measures study is not warranted at this time. Because the area is currently used as an industrial area, it is suggested that NAVSTA amend its Master Plan to prohibit residential development in this area and prohibit the use of the aquifer under the area as a drinking water source.**

**An interim measure has been suggested to remove hotspots where surface soil samples contained chemicals at concentrations exceeding industrial exposure benchmark values. This would require some additional investigation prior to removal of any affected material.**

**Additionally, an ecological risk assessment was not conducted for surface soil at the Shipyard sites, this would be considered a data gap if the use of the site changes from industrial to residential.**

### **> SWMUs 14 and 18**

**Additional investigation under an RFI or a corrective measures study is not warranted at this time. Because the area is currently used as an industrial area, it is suggested that NAVSTA amend its Master Plan to prohibit residential development in this area and prohibit the use of the aquifer under the area as a drinking water source.**

**An interim measure has been suggested to reduce hotspots found in surface soil and sediment in the drainage ditches. This would require some additional investigation and removal of affected material.**

**Assessment of the soil beneath the aircraft mockups and the concrete detention basin should be conducted after firefighting training activities at SWMU 14 are discontinued in 1996. It is recommended that if chemicals are found in surface or subsurface soil samples at concentrations exceeding human health or ecological benchmarks that an interim measure should be conducted.**

### **> SWMU 17**

**Additional investigation under an RFI or a corrective measures study is not warranted at this time. Because the area is currently used as an industrial area, it is suggested that NAVSTA amend its Master Plan to prohibit residential development in this area and prohibit the use of the aquifer under the area as a drinking water source.**