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ADMINISTRATIVE RECORD COVER SHEET

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URS

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Mr. Richard Jubie 3
1CES/CEVR
37 Sweeney Blvd.
Building No. 328
Langley AFB, VA 23665-2107

Mr. Robert J. Cieslik 1
U.S. Army Corps of Engineers
106 South 15th Street
CENWO-PM-HB/Cieslik
Omaha, NE 68102-1618

Community Involvement Coordinator 1
Office of External Affairs
U.S. EPA, Region III
1650 Arch Street
Philidelphia, PA 19107

Mr. Mark Hardner 1
Shaw E&I, Inc.
2790 Mosside Blvd.
Pittsburgh, PA 15146

Mr. Drew Reckmeyer 1
U.S. Army Corps of Engineers
106 South 15th Street
CENWO-PM-HA/Reckmeyer
Omaha, NE 68102-1618

Ira Merin 1
URS Corporation
13825 Sunrise Valley Drive
Herndon, VA 20171

Ms. Margaret Patterson 1
HQACC/CEVR
129 Andrews Street
Suite 102
Langley AFB, VA 23665-2769

Ms. Stacie Driscoll 1
RPM Langley
EPA Region III (Mail Code 3HS13)
1650 Arch Street
Philadelphia, PA 19103-2029

Mr. Robert J. Weld 1
Virginia Dept. of Environmental Quality
Federal Facilities Program Mngr
629 E. Main Street, 4th Floor
Richmond, VA 23219

Mr. Vic Johnston 1
1 FW/PA
159 Sweeney Blvd, Suite 100
Langley AFB, VA 23665

Mr. Michael Bullock 1
U.S. Army Corps of Engineers
752 Durand Road
Building 1329
Langley AFB, VA 23665

Subject: Community Relations Plan, October 2002 Update

Enclosed are your copies of the subject document. Copies of the document have also been provided to each person outlined above. If you have any comments please send them to Laurie Huber no later than 12 November 2002. Comments may be sent via email to Laurie_Huber@urscorp.com or by mail to Laurie Huber, 13825 Sunrise Valley Drive, Suite 250, Herndon, VA 20171-4672.

Sincerely,

Laurie Huber

Senior Regulatory Specialist

Enclosure

URS Corporation
2455 Horsepen Road, Suite 250
Herndon, VA 20171-3426
Tel: 703.713.1500
Fax: 703.713.1512

Community Relations Plan

October 2002 Update

Langley Air Force Base
Hampton, Virginia

TABLE OF CONTENTS

PURPOSE OF DOCUMENT

This Update to the Community Relations Plan (CRP) has been developed by the U.S. Air Force, 1st Fighter Wing, Environmental Restoration Element, Langley Air Force Base, Virginia (Langley). The activities identified in this CRP will be implemented as part of the remedial response effort being conducted under the U.S. Air Force Environmental Restoration Program (ERP) at Langley.

As the Plan outlines, Langley will conduct community relations activities (in accordance with U.S. Environmental Protection Agency Guidelines: Superfund Community Involvement Handbook, 2001) to ensure that the surrounding community has an opportunity to ask questions or express concerns about cleanup actions at the base. The Plan also provides for steps that will be taken to ensure that the surrounding community is well informed about the progress of those actions. This Plan has been prepared to aid in the development of a program that is tailored to the needs of the communities within and surrounding Langley. The CRP identifies issues of community concern and describes the community relations program that will be implemented throughout the cleanup activities conducted at Langley.

1.0 INTRODUCTION AND OVERVIEW

This Update to the Community Relations Plan (CRP) has been developed by the U.S. Air Force, 1st Fighter Wing, Environmental Restoration Element, Langley Air Force Base, Virginia (hereafter Langley or the base). The activities identified in this CRP will be implemented as part of the remedial response effort being conducted under the U.S. Air Force Environmental Restoration Program (ERP) at Langley.

The community relations program at Langley is designed to facilitate communications among Langley personnel, regulatory agencies, project consultants, public officials, residents, and other interested parties. There are three objectives under the program: (1) to provide the community with timely and accurate information about the sites identified for investigation and remediation; (2) to provide and maintain an avenue for two-way communication with surrounding communities so that information needs and concerns are identified; and (3) to encourage community input during the decision-making process. This CRP includes the following sections:

1.0 INTRODUCTION AND OVERVIEW
2.0 FACILITY BACKGROUND/SITE DESCRIPTION
3.0 COMMUNITY OUTREACH
4.0 HIGHLIGHTS OF THE COMMUNITY RELATIONS PROGRAM
5.0 COMMUNITY RELATIONS ACTIVITIES

as well as the following appendices:

A Acronyms and Abbreviations
B List of Key Contacts and Interested Parties
C Media List
D Glossary of Terms
E Information Repository and Public Meeting Locations
F Community Interview Responses
G Technical Assistance Grant Program
H EPA's Federal Facility Hazardous Waste Compliance Program

The information presented in this CRP is based on community input, Department of Defense (DoD) guidance, federal regulations, information from the Langley Public Affairs Office (PAO), and reports from previous environmental investigations. Interviews with local officials, business

representatives, community groups, and residents were conducted in April 2002 to gain insight into the current relationship between Langley and its surrounding communities, to determine community concerns and needs, and to aid in updating the Plan. Because the needs and concerns of the various interested parties will vary over time, this CRP will be updated periodically to reflect the changing interests of the community.

1.1 The Superfund Process

In 1980, U.S. Congress enacted the Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA), more commonly known as Superfund, which was amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). A relatively minor amendment was made to CERCLA in January 2002 called the Small Business Liability Relief and Brownfields Revitalization Act, also known as the Brownfields Act. The implementing regulations for CERCLA are found in Title 40 of the Code of Federal Regulations (CFR), Part 300, National Oil and Hazardous Substance Contingency Plan. CERCLA established a comprehensive program to discover contaminated sites, ensure that the sites are cleaned up, evaluate damages to natural resources, and identify and pursue potentially responsible parties (those contributing polluters who can be held liable for cleanup costs). Although the Act is long overdue for reauthorization, there has been no action by Congress to do so, therefore funding for the program continues under general appropriations.

Superfund activities at federal facilities, where information about site histories, past operations, and responsible parties was already known, were conducted under the U.S. Air Force's Installation Restoration Program (IRP), which was established to identify, assess, investigate, and clean up hazardous waste at disposal sites used in the past. The Air Force program has since been renamed the Environmental Restoration Program (ERP) to more accurately reflect the actions achieved under it. The major steps in the Superfund/ERP process for federal facilities are described in Sections 1.1.1 through 1.1.7. Figure 1-1 shows these steps in the form of a flowchart.

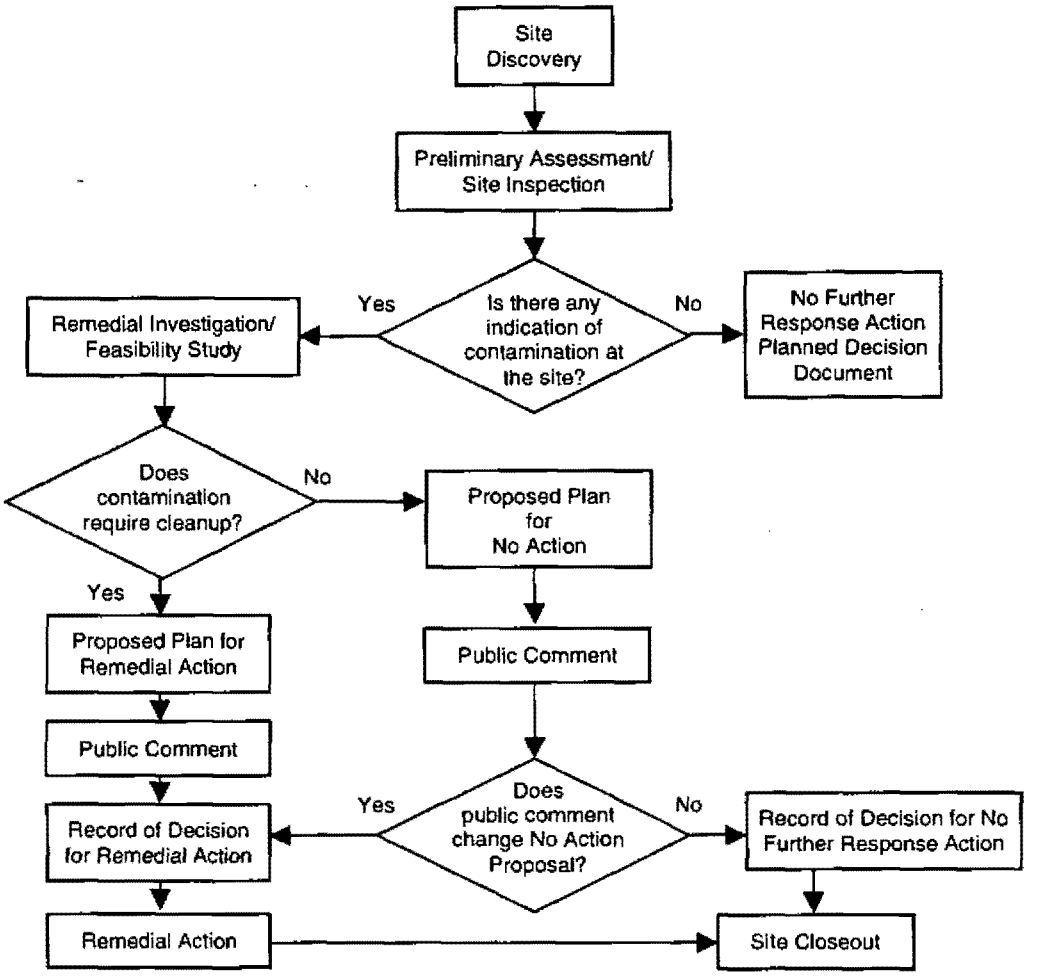

Figure 1-1. The Superfund/ERP Process

1.1.1 Site Discovery

As of April 1988, federal facilities, such as Langley, were required to have conducted and completed investigations of past waste management activities, in response to SARA Section 120(d) (Federal Facilities). This step resulted in the identification of potential ERP sites at a base.

1.1.2 Preliminary Assessment and Site Inspection

The next step in the Superfund process for a federal facility is to complete two studies known as the Preliminary Assessment (PA) and Site Inspection (SI). These studies are conducted to identify ERP sites and to determine if conditions at an ERP site warrant further investigation. At the conclusion of the SI, the Environmental Protection Agency (EPA) scores the site using a system called the Hazard Ranking System (HRS). Sometimes an Expanded Site Inspection (ESI) is needed (i.e., additional fieldwork) to provide more detailed information for use in the HRS. The HRS considers the type and quantity of contamination present at a site and the potential for exposure.

1.1.3 Placement on National Priorities List

If the contamination at a federal facility is determined to be potentially serious enough (or its HRS score is over 28.5, out of a possible 100), the site will be proposed for placement on EPA's National Priorities List (NPL). The NPL is a national list of EPA's top-priority hazardous waste sites. An NPL site is also referred to as a "Superfund site." On May 31, 1994, Langley was co-listed on the NPL, along with the National Aeronautics and Space Administration Langley Research Center (NASA LaRC). The two facilities are contiguous to one another and a HRS score above 28.5 was calculated when viewed as a single site.

1.1.4 *Remedial Investigation and Feasibility Study*

Next a Remedial Investigation (RI) and a Feasibility Study (FS) are conducted for the ERP sites. The RI/FS step may take 1 to 2 years to complete. In addition, a CRP is prepared at the onset of the RI to ensure that the public is informed and involved while the studies are taking place and throughout the remainder of the remediation process. The number and complexity of the sites at Langley has required that individual sites or groups of sites be investigated. As a result, multiple RI/FS studies have been conducted at the base.

During the RI/FS, comprehensive sampling programs are conducted to gather and evaluate data that describe the physical characteristics and contaminants at the site. The purpose of the RI is to identify the nature and extent of contamination both on and off site. As part of the RI, a study known as a Risk Assessment is conducted to identify and evaluate the potential risks that the site may pose to public health and the environment. The Risk Assessment evaluates present and future risks and helps to determine the need for, and the extent of, any required cleanup.

In the FS, various alternatives for cleaning up site contamination are identified and evaluated, based on the following criteria:

- Overall protection of human health and the environment;
- Compliance with applicable or relevant and appropriate requirements (ARARs);
- Long-term effectiveness and performance;
- Reduction of toxicity, mobility, or volume through treatment;
- Short-term effectiveness;
- Implementability;
- Cost;
- State acceptance; and
- Community acceptance.

1.1.5 Proposed Plan Remedial Action Cleanup

Upon completion of the FS, the responsible lead agency publishes a Proposed Plan (PP) that summarizes the alternatives evaluated in the FS and provides a description of the preferred cleanup alternative for the site. The PP is then submitted for public comment for a 30-day period

(which may be extended at the public's request). As the lead agency, Langley will issue the PP for each site at the base that requires RI/FS studies. EPA will maintain final approval authority for any PP.

1.1.6 Record of Decision

Langley, with EPA, Virginia Department of Environmental Quality (VDEQ), U.S. Air Force, and public approval, will select the cleanup alternative at the conclusion of the public comment period, following consideration of all state and community comments for each contaminated site. Once a specific cleanup alternative is selected, a Record of Decision (ROD) is prepared. The ROD is a legal, public document that describes the cleanup action to be conducted at an ERP site. The ROD will contain a Responsiveness Summary that includes each of the comments received on the PP and a response to these comments.

1.1.7 Remedial Design and Remedial Action

The next step in the Superfund/ERP process is a Remedial Design (RD). During this phase, all specific engineering aspects of the cleanup remedy are designed. If city ordinances, deed restrictions, or other institutional controls are part of the remedy, these items are drafted during the RD phase for submittal to the appropriate legal authorities or government agencies for their review, approval, and implementation.

At the conclusion of the RD phase, a Remedial Action (RA) is initiated, constructed, and put into place. The final long-term remedial action typically takes 1 to 2 years to construct, although treatment of contaminated groundwater, if needed, can take much longer. Where necessary, at the conclusion of the RA, groundwater monitoring may continue for decades to ensure that the cleanup remedy remains effective. Typically, Superfund sites undergo a 5-year review to evaluate the effectiveness of the remedy and to ensure that the site continues to pose no threat to public health or the environment.

At Langley, a variety of remedial actions are underway. Remedial actions vary greatly depending on the complexity and degree of contamination involved. Long-term monitoring, removal of underground storage tanks, excavation of soil, soil vapor extraction, and the pumping and treatment of groundwater are among the remedies that have been implemented at the base.

At any time during the Superfund process, if a site poses an immediate threat to public health or the environment, EPA has the authority to intervene with an Emergency Response Action. An Emergency Response Action is an interim (short-term) action that is taken to safeguard public health or the environment (i.e., providing an alternative water supply, removing drums, limiting access to sites, etc.).

1.2 The U.S. Air Force Environmental Restoration Program

The U.S. Air Force's IRP was established in 1975 to identify, evaluate, investigate, and clean up hazardous substances or wastes used at installations in the past. The program title was changed to the Environmental Restoration Program to reflect that environmental protection is the driving force behind activities conducted under the program. The ERP is authorized by the Defense Environmental Restoration Program (DERP) under the Department of Defense (DoD), and it is consistent with CERCLA and the NCP. The ERP, which is exclusively funded by DoD, is implemented in cooperation with EPA and state regulatory agencies.

Appendix H contains a copy of EPA's Federal Facility Hazardous Waste Compliance Program, which describes the roles of the two federal agencies (DoD and EPA) in hazardous waste compliance issues. Federal installations that are listed on the NPL are subject to the additional procedural requirements of CERCLA Section 120, Federal Facilities. One of these requirements involves the implementation of an Interagency Agreement/Federal Facility Agreement (hereafter referred to as a FFA).

1.3 Coordination of Regulatory Agencies

When a federal facility is listed as a Superfund site, the federal agency responsible for the facility is considered to be the responsible party for cleanup activities. The federal agency usually assumes the role of the "lead agency" in conducting the response action. As the current owner and operator of the base, the Air Force has assumed the role of lead agency and is responsible for overall management of the remediation process, including the direction and implementation of community relations activities. Langley has designated Richard Jubie as the Remedial Project Manager (RPM) to oversee all Superfund activities at Langley, including implementation of this CRP. This Plan will be reviewed and approved by EPA and the VDEQ. VDEQ's role at Langley is similar to EPA's in that they both provide oversight on the environmental studies and remediation activities at Langley. The community relations activities at Langley will be conducted in cooperation and close coordination with these agencies and with local authorities.

EPA and VDEQ's role includes participation in the negotiation and implementation of a FFA with Langley. The purpose of the FFA is to:

- Establish the roles and responsibilities of the various federal and state agencies;
- Identify sites of concern before the implementation of final remedial action(s);
- Establish requirements for the performance of the RI/FS;
- Identify the nature, objective, and schedule of all activities to be performed at a site; and
- Ensure that selected remedial actions are implemented according to CERCLA, and applicable federal and state laws and regulations.

Once the FFA is signed, up to 60 days is provided for public review and comment on the Agreement. The FFA becomes effective after all comments are reviewed and resolved. Copies of the final FFA will be placed in the both the Administrative Record and the Information Repository. The information repository for Langley is located at the Hampton Central Library and the Administrative Record is located at the ERP office at Langley AFB (see Appendix E for

specific information). Both locations are open for community members to review documents of public record.

Much of the success of Langley's ERP can be attributed to the Langley Partnership that formed in January 1995 between the Air Force, the VDEQ, the U. S. Army Corps of Engineers (USACE), and two consultants that conduct much of the site investigation and cleanup actions at the base. The Partnership has two tiers: Tier I includes the RPMs from each of the organizations mentioned above. These representatives meet on a regular basis in an effort to streamline the investigation/review/remediation process. Tier II is comprised of supervisory or management level staff from each of the organizations.

1.4 Designation of Overall Responsibility

Langley's Environmental Restoration Element (1 CES/CEVR) oversees and approves all work described in this CRP. Staff in 1 CES/CEVR and the Public Affairs Officer (PAO) at Langley play a major role in the implementation of the community relations activities defined in this document. EPA Region III and the VDEQ act as support agencies. Questions and comments about ERP cleanup activities at the base may be directed to the designated points of contact for Langley, the VDEQ, EPA Region III, or the City of Hampton. In addition, questions and comments are welcomed and encouraged at the periodic Restoration Advisory Board (RAB) meetings. These meetings are held to provide an opportunity for the public to hear about the progress of site cleanup activities. The designated Langley point of contact (POC) for information about ERP cleanup activities at the base is:

Richard Jubie
Chief of Environmental Restoration
Langley Air Force Base
1 CES/CEVR
37 Sweeney Blvd.
Langley AFB, VA 23665
Phone: (757) 764-1082
Fax: (757) 764-8615

An alternate POC at Langley is:

John Tice
Environmental Restoration Project Manager
Langley Air Force Base
1 CES/CEVR
37 Sweeney Blvd.
Langley AFB, VA 23665
Phone: (757) 764-1086
Fax: (757) 764-8615

The designated VDEQ contact person for questions or other comments related to remediation activities at Langley is:

Robert Weld
Federal Facilities Restoration
629 East Main Street
Richmond, VA 23219
Phone: (804) 698-4227
Fax: (804) 698-4383

The designated EPA Region III contact person for technical questions or other comments related to remediation activities at Langley is:

Stacie Driscoll
Remedial Project Manager
Hazardous Waste Enforcement Branch
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19107
Phone: (215) 814-3368
Fax: (215) 814-3051

The designated EPA Region III contact person for community relations activities at Langley is:

Community Involvement Coordinator
Office of External Affairs
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19107
Phone: (215) 814-5532
Fax: (215) 814-3002

The designated City of Hampton contact person for questions or other comments related to remediation activities at Langley is:

Terry O'Neill
Planning Director
City of Hampton
22 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6104
Fax: (757) 727-6895

2.0 FACILITY BACKGROUND/SITE DESCRIPTION

This section provides information on Langley's history, including the operations and nature of activities on the base, as well as descriptions of the current sites identified under the ERP.

2.1 Base Location

The base is located in Hampton, Virginia, and is part of the Hampton Roads metropolitan area in the southern end of the lower Virginia Peninsula (Figure 2-1). The base is located between the northwest and southwest branches of the Back River, a tidal estuary of Chesapeake Bay.

The city of Hampton borders the base to the south and west. The city of Poquoson is located northeast of the base, across the northwest branch of the Back River. Newport News is located west of Langley. A map of the base is provided on Figure 2-2. In addition to the 3,152-acre base installation, Langley supports one off-base facility, the 284-acre Bethel Manor Housing Area.

2.2 Base History

Langley's property was primarily used for agriculture before 1916, when the U.S. government purchased it for use as an aviation research and development establishment. In 1917, the base was officially named Langley Field; it is the oldest continuously active air force base in the United States. The original 1,670-acre installation began as an experimental air field and aircraft proving ground for both the U.S. Army and the National Advisory Committee for Aeronautics (NACA), a predecessor of NASA.

Important advances were made at Langley Field during World War I, including studies of bomb trajectories, development of bomb sights and turn and bank indicators, and construction of an atmospheric wind tunnel. From 1920 to 1931, the Air Service Field Officer's School operated at Langley Field, and a succession of lighter-than-air (LTA) balloons and Army airships were housed at the field. In 1935, the General Headquarters Air Corps, the first autonomous air arm

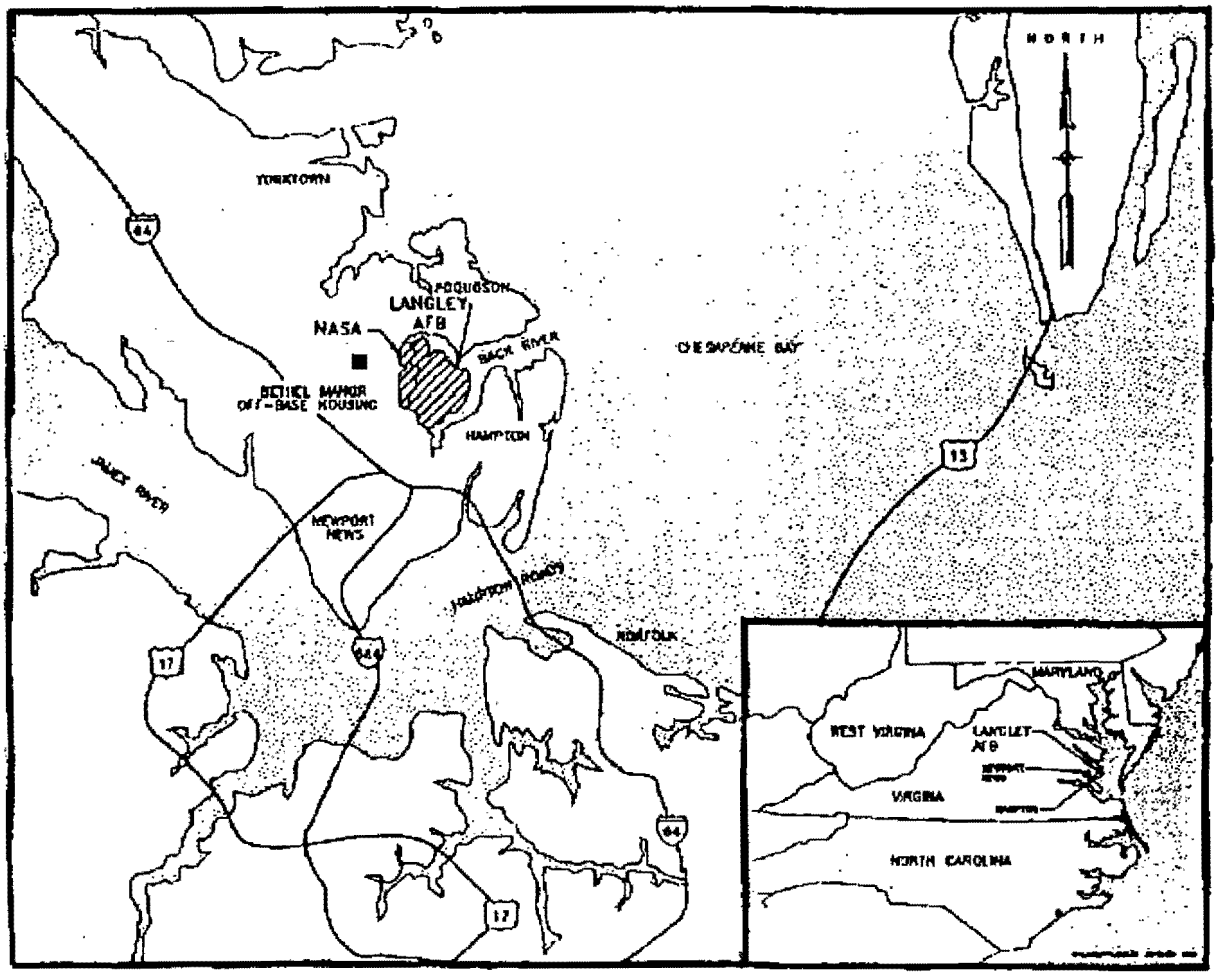

Figure 2-1. Location of Langley AFB, Hampton, Virginia

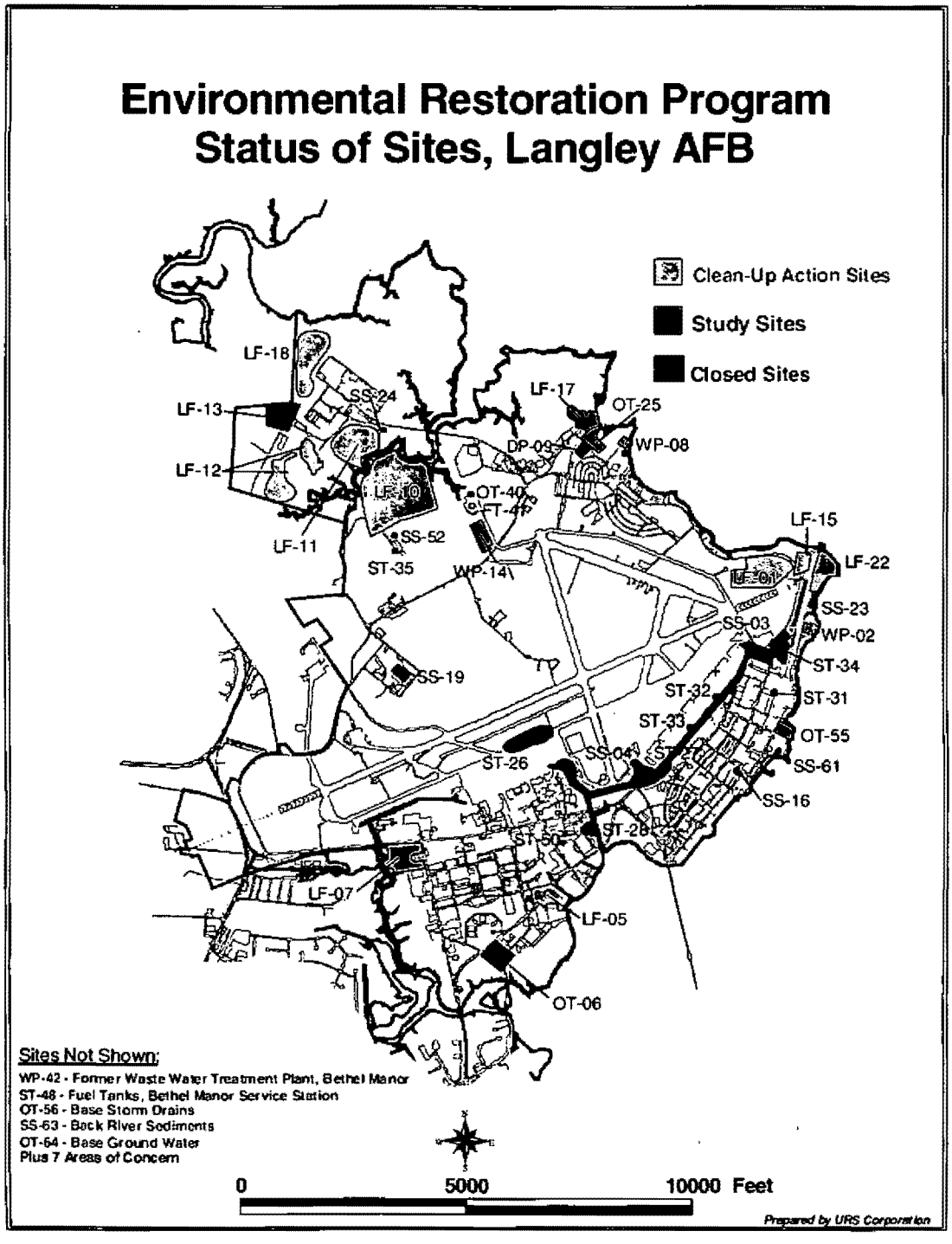

Figure 2-2. Langley Air Force Base Map

within the U.S. Army, was established at Langley Field and remained there until 1941. In 1937, control of the Big Bethel area, located 5 miles west of the installation, was transferred to Langley Field. An adjacent 770-acre tract was acquired in 1941. At the end of World War II, Langley Field was given a training mission, and in 1946, it was selected as the permanent home of the Tactical Air Command (TAC). Langley Field was designated Langley AFB in 1948.

Since World War II, a number of TAC operating units have been assigned to Langley, including the 405th Tactical Fighter-Bomber Wing, which was equipped with P-47, F-84, and F-100 fighters (1953 to 1960), and the 316th Tactical Airlift Wing, which was equipped with C-130 cargo aircraft (1965 to 1975). From 1975 to 1992, the 1st Tactical Fighter Wing, which was equipped with F-15 fighter jets, was the host unit under the TAC. On June 1, 1992, Langley was transferred to the Air Combat Command (ACC). The current host is the 1st Fighter Wing, which is equipped with F-15 fighter jets. The primary mission of the host unit is to maintain the capability for rapid global deployment and air superiority for U.S. or Allied armed forces. Major tenant organizations include HQ ACC, the 480th Intelligence Group, and NASA.

On the NACA side of Langley AFB, aeronautical research expanded to include aerospace activities, and NACA became NASA in 1958. NASA now functions as a separate federal agency from the U.S. Air Force, owns its own property, and controls a separate installation adjacent to the northwest portion of Langley. The installation currently functions as the NASA Langley Research Center (NASA LaRC). In addition, NASA LaRC still occupies several buildings in the eastern portion of Langley's property and is one of the base's largest tenants. NASA owned this property in the eastern portion of the base until 1976, when it was transferred to the U.S. Air Force. NASA LaRC now rents the buildings and facilities, and it has its own ERP sites that are being investigated and remediated independently of Langley's sites.

2.3 Base Description

Langley normally has mild winters; warm, humid summers; and an annual average temperature of 60°F. Precipitation averages 44.7 inches and is well distributed throughout the year. The

prevailing wind direction is from the north during winter months and from the south-southwest the rest of the year.

Only a relatively small portion of Langley is forested or remains in its natural state. Plant communities include approximately 250 acres of mixed oak-hickory hardwood forests, 60 acres of 60-year-old planted loblolly pine forests, 450 acres of tidal salt marshes and an undetermined amount of old-field successional areas. The tidal salt marshes and estuaries of the base are particularly significant resources, with many diverse ecological habitats and plant subcommunities. The remaining portions of Langley are managed lawns and developed areas of buildings, structures, and pavement. The base supports a wide variety of game and fur-bearing species, small mammals, waterfowl, songbirds, raptors, amphibians, reptiles, and fish. The tidal salt marshes on the base are valuable waterfowl habitat and important wintering areas.

Langley is on the outer coastal plain of southeastern Virginia, which is characterized by a series of flat plains and intervening scarps. Elevations on the base range from 5 to 8 feet above mean sea level. Hydraulic conductivity for these soils, as determined by conducting slug tests in monitoring wells, ranged from 5×10^{-4} to 2×10^{-3} feet per minute. Surficial deposits consist of alluvial and terrace deposits of sands and gravels. Most of the soils on Langley are silty and sandy clays or silty and clayey sands with low to moderate permeability and low fertility. Deposits of rich organic soil of estuarine or lagoon depositional origin occur locally. Many areas on the base have been filled with gravel, rubble, pavement, or other construction debris, as a result of general grading, site development, and build-up of low-lying areas.

New Market Creek, Brick Kiln Creek, Tabbs Creek, and several other small creeks drain the Hampton Flat area. The natural drainage of Langley has been modified so that runoff is directed toward Tides Mill Creek, Tabbs Creek, and the Back River. Drainage in the flat areas between streams is poor, and swamps were common in the west portion of the area before stream channels were dredged. The north section of the base is drained by Tabbs Creek, which discharges into the northwest branch of the Back River. Most of the runoff from the runway area is directed into the southwest branch of Back River.

The water supply for Langley is obtained from surface water sources, primarily the Big Bethel Reservoir. The reservoir is owned by the federal government and is operated by Fort Monroe, a nearby U.S. Army base. During dry periods or when equipment at the Reservoir is undergoing maintenance, the City of Newport News Waterworks supplements the base's water supply. In the Langley area, groundwater occurs in three aquifer systems: the shallow water table aquifer, the upper artisan aquifer system, and the principal artisan aquifer system. All three are suspected to contain water of moderate to poor quality due to high salinity and total dissolved solids, and have little potential for use as a conventional water supply. Vertical movement of groundwater is limited by the confining beds. The shallow water table aquifer deposits are marine in origin and consist of a lens of freshwater that floats on top of a denser lens of saltwater. These deposits occur at a depth of 5 to 100 feet. Recharge to the aquifer is directly from precipitation. The upper artisan aquifer is of little importance in the Langley area since yields are very low. The principal artisan aquifer is in Cretaceous strata at a depth of approximately 600 feet. Although this aquifer has the potential to yield large quantities of water, test wells in the Langley area have produced very poor quality water, with chlorides ranging from 4,000 to 5,000 ppm. At these chloride levels, the groundwater from the Cretaceous strata is nonpotable.

2.4 Site Descriptions and Investigation History

A description and history of site-related actions for the ERP sites at Langley are provided below. The locations of these sites are shown on Figure 2-2.

LF-01 Abandoned Landfill, End of 08/26 Runway

ERP Site LF-01 is a former landfill covering 1.5 acres at the northeastern end of 08/26 Runway. The landfill was reportedly used from 1940 to 1950 for the disposal of dredged material from the Back River and general construction debris. Base personnel indicated that a fire truck may have been buried near this area.

From 1992 to 1996, field investigations were conducted and the draft SI was published in February 1996. The site was in the RI phase from 1998 to 1999. A landfill subgroup of the

Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted on October 16, 2000. The final FS was submitted on May 3, 2001; a revised draft PP was submitted on April 25, 2001; and the draft ROD was submitted on May 22, 2001.

The final ROD for this site is combined with several other sites, and was signed by the Air Force in January 2002. The ROD has not been signed by the EPA due to a disagreement between the DoD and EPA over the implementation of institutional controls which will apply to other sites in the KOD. The design for LF-01 is complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed. Soil borings have been taken at this site to further characterize the site and for waste disposal.

WP-02 Abandoned Waste Water Treatment Plant

ERP Site WP-02 is the location of a former wastewater treatment plant (WWTP) covering approximately 0.5 acre near Willoughby Point in the northeastern part of the base. The treatment plant operated from 1917 to 1968 and employed biological treatment using trickling filters. The plant was also equipped to disinfect final effluent prior to its discharge into the Back River. Since 1968, all base sewage has been discharged to the publicly owned treatment works. From aerial photographs of the base taken in the 1940s, it appears that the plant consisted of at least two filtration pits and dry pit beds or a settling pond.

From 1992 to 1996, field investigations were conducted and the draft SI was published in February 1996. An Interim Remedial Action (IRA) was completed in March 1998 at this site. The IRA included removal of the impoundment, piping, pump house, and contaminated soils. The IRA work was completed two months ahead of schedule and $169,000 under budget. Following the IRA in 1998, the site moved into the RI phase that included human health and ecological risk assessments. The final RI was accepted on March 30, 2001. The draft FS was submitted in January 2001; a PP for the site was finalized in November 2001.

A fuel recovery system was installed in 1991 and operated until 1995. In 1997, the base installed monitoring and bailing wells to collect any residual fuel from the treatment plant operation, and on March 15, 1999, the treatment plant was dismantled. The base submitted a modification to the Corrective Action Plan (CAP) to VDEQ, requesting the number of monitoring wells and end-point-sampling requirements be decreased; VDEQ agreed to the abandonment of over 30 monitoring and recovery wells. In 1999 and 2000, a minimal amount of free product was recovered, and in May 2001, an isolated area of petroleum-impacted soil in the vicinity of well P-4 on the southwest end of building 159 was excavated.

After characterization and full reports were provided to VDEQ, the agency sent a Case Closure Letter to the base in August 2001 stating the CAP endpoints had been met and no further action at the site was necessary. The site is considered closed. A Final Decision Document for Site SS-04 was signed in August 2002.

LF-05 Abandoned Landfill, Shellbank Area

ERP Site LF-05 is a former landfill covering 6.4 acres at the intersection of Nealy Avenue and Dogwood Avenue in the Shellbank area in the southern portion of the base. The landfill was used during the 1930s and 1940s for general disposal, but no documentation exists regarding the types of refuse materials that were deposited. Langley was not heavily involved in industrial activities, so the majority of landfilled materials probably were municipal-type refuse. However, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site.

From 1992 to 1996, field investigations were conducted, including the installation of four monitoring wells and three soil samples. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted on October 16, 2000. The final FS was submitted on

May 3, 2001; a revised draft PP was submitted on April 25, 2001; and the draft ROD was submitted on May 22, 2001.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. However, the design for Site LF-05 is nearly complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

OT-06 Abandoned Entomology Site and Former Wastewater Treatment Plant, Shellbank Area

ERP Site OT-06 is the location of a former entomology building and a former wastewater treatment plant covering approximately 6.3 acres north of the mouth of Tide Mill Creek in the Shellbank area in the southern portion of the base. Operations in the former entomology building used DDT, dieldrin, chlordane, lindane, and malathion. The old Shellbank Sewage Treatment Plant was a secondary, biological treatment facility that used trickling filters and was equipped to disinfect final effluent. A disposal area for wastewater treatment plant (WWTP) sludge was also located at the site. Operations at this site began in 1943. The entomology building was demolished in the 1960s. The WWTP was abandoned in 1968.

In 1991, the base sent a Decision Document (DD) to the VDEQ Waste Division recommending no further action be taken at this site. VDEQ rejected the recommendation because there was confusion regarding the data from Site OT-25 pertaining to Site OT-06. In 1995 the base closed a children's playground located near the site due to potential exposure to pesticides. A few years later the base removed the playground equipment as part of an IRA. In 1999 the base submitted the draft final RI report which was finalized on March 31, 2000.

The final PP was completed on May 15, 2000; the public comment period ended with a public meeting in June 2000, and the ROD for no further action was signed on September 25, 2000. Site OT-06 is considered closed.

LF-07 Abandoned Landfill, Shellbank Area

ERP Site LF-07 is a former landfill covering 8.9 acres east of the north branch of Tide Mill Creek and southwest of the intersection of Sweeney Boulevard and Elm Street in the Shellbank area in the southern portion of the base. The landfill was active from 1948 to 1963 as a general landfill, but documentation of the types of refuse materials that were deposited there does not exist. Langley was not heavily involved in industrial activities, so the majority of landfilled materials probably were municipal-type refuse. However, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site.

In 1982 Langley conducted a Phase II Investigation which identified low contamination levels, so no further investigation or cleanup action was recommended. A geophysical survey was conducted in 1992 in order to determine the extent of the fill area. Several anomalous zones were identified as likely to be associated with buried metallic objects consistent with possible landfill activity and/or buried construction debris. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. An addendum to the RI was submitted in June 2000 and the final FS was completed in 2001. The FS recommends the use of a "Presumptive Remedy," or the application of cover material over the landfill with institutional controls.

The final ROD was signed by the Air Force in January 2002. The ROD has not been signed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. The agencies agreed to proceed with the cleanup action expecting that the disagreement would be resolved by the time work is completed. Cleanup action at Site LF-07 was completed in August 2002.

WP-08 Abandoned Waste Water Treatment Plant, LTA Area

ERP Site WP-08 is the site of a former WWTP covering approximately 0.7 acre adjacent to the Back River in the northeastern part of the base, in the LTA area. The treatment plant was operated from 1930 to 1968 and provided only primary treatment. The plant was also equipped to disinfect final effluent before discharging it to the Back River. Interviews also indicated that a sewage lagoon was operated near Building 926 until 1940, but no documentation confirms its existence. Beginning in 1968, all base sewage was discharged to the publicly owned treatment works. The WWTP was fully demolished prior to 1978.

The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. The final RI report was accepted on March 30, 2001. The draft PP was submitted on May 18, 2001 and the draft ROD was submitted on June 15, 2001.

The ROD for Site WP-08 is still awaiting signatures from the EPA and the Air Force due to the nationwide disagreement pertaining to institutional controls.

DP-09 Abandoned Gas Cylinder Disposal Site, LTA Area

ERP Site DP-09 is a former gas cylinder disposal site covering approximately 1.8 acres in the LTA area in the north-central portion of the base. A portion of this area includes the base housing area. The area was reportedly used to bury gas cylinders used during the LTA dirigible work conducted from the 1920s to 1935. All buried cylinders found to date were either empty or filled with sand.

A DD to close Site DP-09 was signed on November 13, 1997 and the site is considered closed.

LF-10 Abandoned Landfill, Golf Course

ERP Site LF-10 is a former landfill covering 18.9 acres in the north-central portion of the base, south of Tabbs Creek. The landfill was in use from 1953 to 1965, but documentation does not

exist regarding the types of refuse materials that were deposited there. Langley AFB was not heavily involved in industrial activities, so the majority of landfilled materials probably were municipal-type refuse. However, materials such as waste oils and solvents in drums, paints, thinners, batteries, empty pesticide and herbicide containers, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site.

The area was also formerly used as a bombing practice range, probably during the 1920s. Several practice bombs have been unearthed in this area. The site is bounded to the north by Tabbs Creek. An aerial photograph of the area taken in 1950 clearly shows the landfill extending to the edge of the creek. The area formerly occupied by the landfill has been reclaimed and is now part of one of the base golf courses.

In 1982, the base conducted a Phase II Investigation, consisting of monitoring well installation and surface water, groundwater, and sediment sampling. Results showed contamination to be low, therefore no further investigation or RA was conducted. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI report, which included an ecological risk assessment. An addendum to the RI was submitted in June 2000 and the final FS was completed in 2001. The FS recommends the use of a "Presumptive Remedy," or the application of sufficient cover material over the landfill with institutional controls.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. The design for this site is nearly complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

LF-11 Abandoned Landfill, Tabbs Creek Area

ERP Site LF-11 is a former landfill covering 14.6 acres north of Tabbs Creek in the northwest portion of the base. The landfill was in use from 1965 to 1972, and was reportedly used for the disposal of organics, inorganics, solvents, mixed municipal wastes, construction debris, chemical wastes, and sanitary refuse. Materials such as waste oils and solvents in drums, paints, thinners, empty pesticide and herbicide containers, tires, fabrics, construction debris, and sanitary wastewater treatment plant sludge may also have been deposited at this site.

In 1982, Langley conducted a Phase II Investigation, consisting of monitoring well installation and surface water, groundwater, and sediment sampling. Results showed contamination to be low, therefore no further investigation or RA was recommended. In 1992, the base installed two monitoring wells and collected groundwater samples to further determine the extent of contamination. Four geoprobe groundwater samples and three surface soil samples were also collected and analyzed. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. An addendum to the RI was submitted in June 2000 and the final FS was completed in 2001. The FS recommends the use of a "Presumptive Remedy," or the application of sufficient cover material over the landfill with institutional controls.

The final ROD was signed by the Air Force in January 2002, but has not been singed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. The design for this site is nearly complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

LF-12 Abandoned Landfill, Munitions Storage Area, Northwest Area of Base

ERP Site LF-12 is a former landfill covering 16.5 acres near the Munitions Storage Area (MSA), north of Tabbs Creek and southeast of Gregg Road in the northwest portion of the base. The

landfill was in use from 1972 to 1981 for the disposal of organics, inorganics, mixed municipal wastes, construction debris, and sanitary refuse, but no documentation exists of the types of refuse materials that were deposited in the landfill. Materials such as waste oil and solvents in drums, paints, thinners, tires, fabrics, and construction debris may also have been deposited in the landfill.

In 1982, the base conducted a Phase II Investigation. Results showed contamination levels were low and no further investigation or RA was recommended. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. An addendum to the RI was submitted in June 2000 and the final Feasibility Study was completed in 2001. The FS recommends the use of a "Presumptive Remedy," or the application of sufficient cover material over the landfill with institutional controls.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. The agencies agreed to proceed with the cleanup action expecting that the disagreement would be resolved by the time work is completed. Cleanup action at Site LF-12 was completed in August 2002.

LF-13 Abandoned Landfill Munitions Storage Area, Northwest Area of Base

ERP Site LF-13 is a former landfill covering approximately 12 acres west of Gregg Road in the northwest portion of the base. Site LF-13 was reportedly used for about one month (date unknown) as a small landfill trench. No documentation exists regarding the types of refuse materials that were deposited at the site. Langley was not heavily involved in industrial activities, so the majority of landfilled materials probably were municipal-type refuse. Although unlikely, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site. Base personnel also indicated that NASA may have

deposited unknown materials in the landfill in the past that potentially may contribute to any contamination.

The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted in December 1999; the final PP was completed on May 15, 2000, followed by a public comment period, which ended June 13, 2000. A public meeting for the PP was held on June 1, 2000.

A ROD for no further action was signed on September 25, 2000, and Site LF-13 is considered closed.

WP-14 Abandoned Chemical Leach Pit

ERP Site WP-14 is a former chemical leach pit covering approximately 3.6 acres north of Pistol Butt Road near the firing-in abutment (Building 1303) in the north-central portion of the base. The site is the approximate location of an old chemical leach pit adjacent to the taxiway that was used for the collection of washdown and spills associated with loading pesticides onto spray planes. The main contaminant entering the leach pit was malathion, which was used to control mosquitoes, but contamination from other pesticides is possible. The area was also formerly used as a bombing practice range, probably during the 1920s. Several practice bombs have been unearthed in this area.

In 1982, Langley conducted a Phase II Investigation which resulted in no pesticide contamination being found; no further action was recommended. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. The final RI, including an ecological risk assessment was accepted on March 30, 2001. The PP was completed in 2001, followed by a public comment period which ended in November 2001.

The ROD for Site WP-14 is still awaiting signatures from the EPA and the Air Force due to the nationwide disagreement pertaining to institutional controls. The remedial design project is scheduled and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

LF-15 Abandoned Landfill, Willoughby Point

ERP Site LF-15 is a former landfill covering 0.1 acre east of Ward Road and west of the north end of the site of the former Mile-Long Building (Building 720) in the heavier-than-air (HTA) area in the eastern portion of the base. From 1930 to 1940, the site was used for the disposal of construction debris and old vehicles, apparently including an old fire truck.

In 1991 the base sent a DD to the VDEQ Waste Division recommending that no further action be taken and that the site be removed from further consideration under the ERP. The VDEQ rejected the recommendation and requested further investigation at the site since soil and groundwater sampling had not been conducted. In 1992 the base performed geophysical investigations to delineate the extent of the landfill. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted in October 2000; the final FS was submitted on May 3, 2001. The revised draft PP was submitted on April 25, 2001, and the draft ROD was submitted May 22, 2001.

The final ROD for this site is combined with several other sites, and was signed by the Air Force in January 2002. The ROD has not been signed by the EPA due to a disagreement between the DoD and EPA over the implementation of institutional controls which will apply to other sites in the ROD. The design for LF-15 is complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed. Soil borings have been taken at this site to further characterize the site and for waste disposal.

SS-16 Fuel Saturated Area, Dodd Boulevard and Thompson Street

ERP Site SS-16 is a possible fuel-saturated area covering approximately 0.4 acre east of the intersection of Dodd Boulevard and Thompson Street in the southwestern portion of the base. Fuel was reportedly stored at the site in six USTs associated with a former gas station. Two USTs reportedly contained fuel oil, and the contents of the other four USTs are unknown. Based on a review of historical records, the tanks have been removed. Leakage from these tanks may have resulted in contamination of the soil and groundwater in the vicinity.

In 1982, Langley conducted a Phase II Investigation and the site was recommended for no further action. The draft SI was published in February 1996, and VDEQ notified the base on September 3, 1996 that further corrective action would not be required. Site SS-16 is considered closed.

LF-17 Abandoned Landfill, LTA Area

ERP Site LF-17 is a former landfill covering 4.8 acres adjacent to the Back River near the old entomology building (ERP Site OT-25) area in the LTA area in the north-central portion of the base. The landfill was used from 1917 to 1945, but apparently documentation of the types of refuse materials that were deposited there does not exist. Langley was not heavily involved in industrial activities, so the majority of the landfilled materials probably were municipal-type refuse. However, materials such as waste oil and solvents in drums, paints, thinners, batteries, tires, fabrics, fly ash from coal burning, and construction debris may have been deposited at the site. The site also includes a trash burning pit (ERP Site OT-38 Area C) that was used during the winter months when landfill operations were difficult due to high water table conditions. The area is presently occupied by the base skeet range. Portions of the site are considered wetlands.

The draft SI was published in February 1996, and an evaluation of lead contamination was completed in 1997. The site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted in February 2001 and is considered

complete. The draft FS was submitted on June 15, 2001 and it was determined that additional sampling of the lead pellets from the skeet range was required in order to evaluate impacts on waterfowl. The results from the lead pellet sampling and study were incorporated into the FS.

The Dirigible Area of Concern (AOC) was discovered during an investigation at Site LF-17. Lead contamination was detected in groundwater samples; one well showed high levels of lead, but upon re-sampling much lower concentrations were detected. Further evaluation of the Dirigible AOC was determined not to be required. The dirigible AOC is considered closed.

LF-18 Abandoned Landfill, Northwest Corner of Base

ERP Site LF-18 is a former landfill covering 9.4 acres west of the MSA east of NASA property in the north-central portion of the base. The landfill was used in the 1930s, for the disposal of wood, stumps, and construction debris. Base personnel also indicated that NASA might have deposited unknown materials in the landfill in the past that potentially may contribute to any contamination.

The site is now densely overgrown and partially wooded, and it is almost impossible to reach the northern part of the area, except on foot. Some areas are also extremely marshy. The site is most easily accessed at its southern end via a dirt track leading from Gregg Road. There is evidence in this area of more recent dumping of domestic trash. The eastern and western boundaries of the site are delineated by the fences that run along either side.

In 1992 Langley conducted a partial geophysical survey, installed three monitoring wells and collected groundwater and soil samples. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted on October 16, 2000; the final FS was submitted on May 3, 2001. The revised draft PP was submitted April 25, 2001, and the draft ROD was submitted May 22, 2001.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between the DoD and EPA over specific language pertaining to the implementation of institutional controls. The agencies agreed to proceed with the cleanup action expecting that the disagreement would be resolved by the time work is completed. Cleanup action at Site LF-18 was completed in August 2002.

SS-19 Transformer Storage Area, Building 1335

ERP Site SS-19 is a former transformer storage area, approximately 3 acres in size, located southeast of Durand Road in the west-central portion of the base. The site was a storage area for out-of-service electrical transformers containing polychlorinated biphenyls (PCBs). More recently transformers were stored on a concrete pad in Building 1335. Before PCB regulations were issued in 1979, transformers were stored outside the building in a gravel-covered, asphalt-base fenced area. Some minor leakage was reported in the outside storage area. Currently, the site is used as a trailer/recreational vehicle park for the base.

In 1992 Langley conducted a Phase II Investigation consisting of soil samples testing for PCBs, but none were detected. In 1991, the base took five soil samples and found that PCB levels did not exceed detection limits. In June 1991, approximately 1 gallon of PCB-containing electrical fluid was spilled on the ground while transporting a transformer. Soil sampling in November 1991 indicated PCB levels in the soil ranged from non-detect to 1.33 ppm. The draft SI was published in February 1996. Additional sampling was collected in 1998 due to the lack of documentation regarding the action taken after the spill. Results indicated contamination concentrations above action levels. The contaminated soil was removed during the summer of 1998, and additional sampling verified that the contamination was removed.

A DD was signed on December 2, 1998 to close the site with no further action. Site SS-19 is considered closed.

ST-21 Fuel Saturated Area

ERP Site ST-21 is a fuel-saturated area near the Control Tower in the south-central portion of the base. The site is located in the area immediately surrounding Building 381 and includes the pumping station (Building 380) and the fire station (Building 375).

This site is the same as Site ST-26, West Apron/Control Tower, Fuel Saturated Area. All further investigation and remediation activities following the 1982 Phase *II Investigation* were undertaken as part of the work performed at Site ST-26. No more reporting will be done for this site; the site is considered closed.

LF-22 Abandoned Landfill, Willoughby Point

ERP Site LF-22 is a former landfill covering 2.9 acres near the Back River at Willoughby Point in the western portion of the base. The landfill was used in the 1930s, but documentation does not exist regarding the types of refuse materials that were deposited there. Since Langley was not heavily involved in industrial activities, the majority of landfilled materials were municipal-type refuse. However, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site.

In 1992 the base conducted geophysical investigations to delineate the location and extent of the landfill. Three monitoring wells were installed and sampled; four additional soil samples were collected. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. A landfill subgroup of the Langley Partnership used aerial photography and test pit findings to draft the RI, which included an ecological risk assessment. The final RI was submitted on October 16, 2000; the final FS was submitted on May 3, 2001. The revised draft PP was submitted on April 25, 2001; and the draft ROD was submitted May 22, 2001.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between the DoD and EPA over specific language

pertaining to the implementation of institutional controls. The remedial design for Site LF-22 is nearly complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

SS-23 Former Coal Storage Area, Willoughby Point

ERP Site SS-23 is the location of a former coal storage area covering approximately 0.6 acre near Ward Road at Willoughby Point in the west portion of the base. The site was used as a major coal storage area from 1917 to the early 1960s, when coal was the primary heating fuel at Langley. Coal was formerly transported to this location by rail, which has since been removed. Coal was unloaded and stored inside a concrete-walled impoundment. This impoundment has since been demolished, with only a portion of the concrete floor remaining. Site SS-23 is flat and mostly covered with gravel and concrete.

In February 1996 Langley published the SI report and no further action was recommended. A DD to close out the site was signed on November 13, 1997 and the site is considered closed.

SS-24 Abandoned Waste Oil Storage Area, Munitions Storage Area

ERP Site SS-24 is a former waste oil storage area covering 0.1 acre near a picnic pavilion and parking lot at the southern end of the MSA in the northwest portion of the base. Site SS-24 was used as a storage area for waste oils and solvents that were collected in 55-gallon drums, taken to the site, and emptied into two fiberglass USTs (6,000- and 8,000-gallon capacity). The tanks, which are covered with concrete, were installed in 1972. These solvents and wastes included 1,1,1-trichioroethane, methyl ethyl ketone, toluene, PD-680, zinc chromate primers, polyurethane paints, and phenolic paint strippers. Three other small USTs were also used to store waste petroleum products. The waste oils and solvents were often spilled due to difficulty in maneuvering the 55-gallon drums. All solvents and oils were pumped out of the tanks in 1986. Site SS-24 is located within five yards of a grass-covered volleyball court.

The base installed four monitoring wells in 1992 and collected groundwater and soil samples. The draft SI was published in February 1996. An IRA included the removal of the two tanks in 1997. In 1999, sampling work for this site was completed and a draft SI Addendum was submitted on October 5, 1999.

A DD was signed on November 1, 2000 and Site SS-24 is considered closed.

OT-25 Old Entomology Building and Abandoned Pesticide/Herbicide Storage Area, Building 965

ERP Site OT-25 is an old entomology building and storage yard covering approximately 3.5 acres in the LTA area in the northern portion of the base. The site consists of the remains from the demolition of Building 965 and a former storage yard. Interviews indicate that spills, primarily of malathion, had occurred in the storage yard. Entomology operations began at the site in 1971 and ceased in 1983. From 1983 to 1987, the building was used as office space and for storage of materials by a janitorial service contractor, but it has remained vacant since that time. Pesticide and herbicide management practices in the building and its surroundings led to the contamination of building material, soil, and groundwater near the building.

In 1982 Langley conducted a Phase II Investigation consisting of soil sampling. Further investigations sampled the wood, soil, and groundwater surrounding the building and resulted in no additional action necessary. On January 20, 1989, several hundred gallons of diesel fuel spilled from a 10,000-gallon AST and spread out under the building. In 1991 the base sent a DD to VDEQ recommending no further action; VDEQ did not approve the recommendation because wood samples from the building showed contamination. Further investigation of soils under and around the building concluded that chlordane levels were below the regulatory limit, but total petroleum hydrocarbons were above the 100 mg/kg limit. The draft SI was published in February 1996, and the building was demolished down to the foundation. A year later an IRA was completed to remove the foundation and contaminated soils. The site was in the RI phase from 1998 to 1999. The final RI was accepted March 30, 2001. The draft FS was submitted December

28, 2000, reviewed, comments incorporated, and completed. The draft PP was submitted on June 13, 2001 reviewed, comments incorporated, and completed.

A ROD was submitted on November 23, 2001; the document is awaiting signatures from the EPA and the Air Force due to the nationwide disagreement pertaining to institutional controls. The agencies have agreed to proceed with the remedial design and cleanup action expecting that the disagreement will be resolved by the time the work is complete.

ST-26 West Auron/Control Tower, Fuel Saturated Area

ERP Site ST-26 consists of several fuel-saturated areas, including the Control Tower Area, the Hot Pits Area, and Brown's Creek, all in the south-central portion of the base. The Control Tower Area is the area immediately surrounding Building 381 and includes the pumping station (Building 380) and the fire station (Building 375). The Hot Pits Area is at the northern edge of the jet parking area, where jets are fueled and defueled. Brown's Creek is a tidal creek that originates near the control tower and flows directly into the Back River. All work originally identified for SS-21 is being conducted as part of ST-26.

In 1982 Langley conducted a Phase II Investigation consisting of soil sampling; the report recommended no further action was necessary. In 1989 and 1990, the base installed a monitoring well and performed soil, sediment, surface water, and groundwater sampling. A year later an IRA recovered approximately 2,000 gallons of floating fuel; such activities continued from 1995 to 1998 through a groundwater treatment system. In October 1998 the VDEQ found the Hot Pits and Brown's Creek areas to be clean and allowed the monitoring and collection wells to be abandoned. DDs were submitted to VDEQ on June 23, 1999. A field investigation in January 2000 found the plume had not spread, but the report recommended continuing sampling of some of the wells. Fuel was found to be accumulating in one of the wells, and it was determined that this well would be managed separately from site ST-26.

The groundwater treatment plant was dismantled in late 2001, and the DD was approved by VDEQ. Site ST-26 is considered closed. The well that contains free product is managed by VDEQ as PC#96-2288 and is not considered part of the site.

ST-27 Danforth Fuel Line Leaks, Fuel Saturated Area

ERP Site ST-27 includes the underground portion of the JP-4 fuel transfer line that carried jet fuel from the Bulk Fuel Storage Area (ERP Site ST-34) to the West Parking Apron (ERP Site ST-26) in the southeastern part of the base. The fuel transfer line is a 6,600-foot-long, 8- to 10-inch-diameter steel pipe that ranges in age from 30 to 50 years. Approximately 5,600 feet of the pipeline is buried underground. The pipeline starts at Building 741, runs under Danforth Avenue to its intersection with Sweeney Boulevard, continues parallel to Sweeney Boulevard, turns northwest near the intersection with Nealy Avenue, and terminates at Building 380. The site was originally identified in 1987 when preventative maintenance leak testing was performed on the fuel lines. The testing indicated several leaks along the length of the fuel line, and further investigation was recommended.

Use of the pipeline was discontinued in April 1990 and the base prepared a Corrective Action Plan (CAP) in 1991 to remediate the free fuel contamination. The base trenched and removed several sections of the pipeline in 1994, then installed sumps to collect any additional product. Further testing found no free product in those sections, or in other sections of the pipeline.

A DD closed Site ST-27 on July 26, 2000. A year later the collection sumps were properly abandoned.

ST-28 BX Service Station, Fuel Saturated Area, Building 258

ERP Site ST-28 is a fuel-saturated area covering approximately 3 acres at the BX gas station on Pine Road in the south-central portion of the base. The BX gas station provides gasoline for nonmilitary vehicles and is approximately 300 feet west of Brown's Creek, which discharges into the Back River. The site was originally identified in 1987, when leaks in USTs at the gas station

resulted in fuel bubbling up into Brown's Creek. Spill response was initiated, and several shallow recovery wells were installed parallel to the creek to recover the fuel. Approximately 1,350 gallons of gasoline was recovered in November and December 1987.

An IRA conducted at the site in 1991 recovered another 1,000 gallons of fuel. From 1995 to 1999 Long Term Operation of remediation systems were in place, including the removal of eight USTs. A closeout letter was issued by VDEQ on November 29, 1999. A DD to formerly close Site ST-28 was signed on February 22, 2001.

ST-29 Abandoned USTs, Building 788

ERP Site ST-29 is a series of eight 25,000-gallon underground JP-4 fuel tanks that were connected to the main JP-4 fuel transfer line. Located under the parking lot adjacent to Building 788 in an area of approximately 0.8 acre in the southeast portion of the base, they have been out of service for many years. Extensive fill, including gravel, pavement, etc., is present in the upper several feet around the tanks as a result of their installation.

In 1991 Langley conducted an IRA to recover floating fuel by installing a recovery well that pumped the fuel into drums for disposal. Approximately 500 gallons of fuel was recovered from groundwater. The base prepared a CAP to remediate free fuel contamination, and a RI was initiated in 1992 to close the tanks. The tanks were closed in 1994. Monitoring indicated that two wells continued to have product and bailing continued at those sites through 1999.

A DD for no further action was signed by VDEQ on April 4, 2000. Site ST-29 is considered closed. In 2001 the monitoring wells were properly closed.

ST-30 Engine Test Cell, Fuel Saturated Area Building 737

ERP Site ST-30 is a fuel spill at an engine test cell (Building 737) located in the HTA area in the eastern portion of the base. The test cell was used to test jet engines until 1989. Unburned fuel

from the floor of the test facility and spillage from the fuel feed tank were recovered in the building's oil/water separator.

The site was first identified on June 3, 1987 when an oil sheen was observed in the Back River in the vicinity of Building 737. An investigation by base personnel determined that the sheen originated from a leak in the concrete containment chamber of the oil/water separator.

An IRA of soil and groundwater remediation was completed in 1989 and no further action was taken. The site is considered closed.

ST-31 UST, Fuel Saturated Area, Building 655

ERP Site ST-31 includes a former fuel-saturated area covering approximately 0.4 acre and a 60,000-gallon concrete underground fuel tank beneath a parking lot directly east of Building 655 in the southeastern portion of the base. Constructed in 1949, the tank has been used to store No.2, No.4, and No.6 fuel oil. The fuel oil powers the steam generators in Building 655's heating plant. The site was originally identified when, during the repair of a fire hydrant, fuel was encountered in a trench excavated immediately adjacent to the tank. Water has also been observed in the tank, indicating cracks in the concrete and possible fuel leakage.

In 1991, Langley prepared a CAP to remediate free fuel contamination and an IRA recovered floating fuel product. Groundwater sampling was conducted in 1994 to confirm remediation was successful; however floating fuel product remained in one well. From 1996 to 1999, monitoring and bailing at the well to clean up the residual fuel. The tank was removed from service and on October 26, 1998 and the VDEQ issued a site closure letter.

The site wells were closed in 1999 and a year later the base submitted a DD for no further action. It was signed by VDEQ on April 14, 2000 and Site ST-31 is considered closed.

ST-32 Abandoned UST, Building 753

ERP Site ST-32 is a fuel-saturated area covering approximately 0.1 acre and the underground fuel tank beneath the grassy area between Building 753 and Danforth Avenue in the southeastern portion of the base. The site consists of an abandoned 60,000-gallon concrete fuel tank that is buried approximately 11 feet underground adjacent to the JP-4 pipeline. The tank was constructed in 1949 and stored No. 2 and No. 4 fuel oil. The fuel oil was used in Building 753's steam generation system. The site was originally identified when a leak was discovered on the side of Building 753. Water has also been observed in the UST, indicating cracks in the concrete and possible fuel leakage.

The base remediated the site in 1993 and closed the tank; VDEQ issued a closure letter on July 24, 1996. Site ST-32 is considered closed.

ST-33 Abandoned UST, Building 755

ERP Site ST-33 includes a fuel-saturated area covering approximately 0.1 acre and an underground fuel tank beneath the grassy area between Building 755 and Danforth Avenue in the southeast portion of the base. The underground tank is an abandoned 60,000-gallon concrete fuel tank that is buried approximately 11 feet below ground surface adjacent to the JP-4 pipeline. The tank was constructed in 1949 and was used to store No. 2 fuel oil. The fuel oil was used in Building 755's steam generation system. The site was originally identified when water was observed in the UST, indicating cracks in the concrete and possible fuel leakage.

The base installed a monitoring well in 1989 and conducted soil and groundwater sampling; No. 2 fuel contamination was found in the soil and groundwater, but no free floating fuel was found. The tanks were closed in 1993, filled with an inert material, and sealed off to prevent future use. From 1996 to 1999 the base monitored two wells and continued bailing residual fuel.

A DD for no further action was signed by VDEQ on April 4, 2000. Site ST-33 is considered closed.

ST-34 Large Aboveground JP-4 Tanks - Fuel Farm, Facility 707

ERP Site ST-34 is the bulk fuel storage area located near the Back River in the eastern portion of the base. The site consists of six large aboveground JP-4 storage tanks. Five tanks have a volume of 640,000 gallons each and one has a volume of 420,000 gallons. Each tank is surrounded by a 5-foot-high asphalt-covered earthen berm as secondary containment. The tanks were built on concrete piers and were originally not covered. Past site investigations, consisting of monitoring well installation and groundwater sampling, have indicated little or no fuel contamination of groundwater, and no free fuel was encountered.

In 1991 the base investigated and found that no remediation was necessary. VDEQ issued a closure letter on July 24, 1996 and the site is considered closed.

ST-35 Abandoned Septic Tanks Golf Course Maintenance, Building 1301

ERP Site ST-35 covers approximately 0.4 acre and is the site of an abandoned septic tank and drain field located adjacent to the Golf Course Maintenance Building (Building 1301) in the west-central portion of the base. Site ST-35 was also known as Site ST-53. Pesticides and herbicides (including Bromosol, 2,4-D, and "Mix 7") were reportedly disposed in the tank, which was used until the 1970s. Drawings accurately define the location of the septic tank and its drain field at the southwest corner of Building 1301, with the drain field running to the southeast. The tank is overlain by concrete and tarmac. The area was also formerly used as a bombing practice range, probably during the 1920s. Several practice bombs have been unearthed in this area.

The base completed a IRA in 1996 and published a SI report. An additional inspection in 1998 resulted in an Addendum, which was completed in 1999. A DD was signed on February 24, 1999, and Site ST-35 is considered closed.

OT-38 Four Waste Oil and Trash Burn Areas, Basewide

ERP Site OT-38 includes waste oil and trash burn areas basewide. No documentation exists as to what materials were disposed at the burning grounds on the base. However, interviews indicate that waste oils and solvents were burned in four dug pit areas from 1917 to 1960. One of the areas (Area C) was also used as a burning ground for trash disposal during winter months, when landfill operations were difficult.

In 1998 the site was in the RI phase, and an ecological screening analysis determined that there were no ecological concerns. The overall site was closed in 1999, and a ROD for no further action for areas 38A and B was signed on January 14, 1999. Area 38C became part of Site LF-17, and Area 38D became part of LF-07. All four burn areas are considered closed.

OT-40 Abandoned Exploded Ordnance Disposal (EOD) Training Area, Firing-in Abutment, Building 1303

ERP Site OT-40 is a former EOD training area covering approximately 0.6 acre near ERP Site FT-41 and the firing-in abutment (Building 1303) in the north-central portion of the base. Small-scale proficiency range operations for EOD training were conducted at the site using light explosives with a limit of one blasting cap. Detonation of small explosive charges was conducted in the past with the permission of the Base Commander. The firing-in abutment was also used in the past for the sighting-in of machine guns from aircraft. The area was also formerly used as a bombing practice range, probably during the 1920s. Several practice bombs have been unearthed in this area.

A SI published in 1996 prompted a DD for no further action to be signed on November 13, 1997. Site OT-40 is considered closed.

FT-41 Abandoned Fire Training Area, Firing-in Abutment, Building 1303

ERP Site FT-41 is a former fire training area covering approximately 0.5 acre near Site OT-40 and the firing-in abutment (Building 1303) between Weyland Road and Worley Road in the north-central portion of the base. The former fire training area was first used in the early 1960s. Fire training exercises were conducted at least quarterly and occasionally up to five times per month. For each exercise, approximately 300 to 500 gallons of waste fuel, JP-4, and hydraulic fluids were poured directly onto the ground, ignited, and then extinguished. The former fire training area had no facilities to retain or collect unburned fuel. The fire training waste (run-off, foaming agents, etc.) may have migrated into nearby surface waters and eventually into Tabbs Creek. The area was also formerly used as a bombing practice range, during the 1920s. Several practice bombs have been unearthed in this area.

In 1985 the base constructed a new fire training area over this site. JP-4 was last used at the site in 1992. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999. The final RI was submitted on October 16, 2000, and the final FS was submitted on May 3, 2001. The revised draft PP was submitted on April 25, 2001, and the draft ROD was submitted May 22, 2001.

The final ROD was signed by the Air Force in January 2002, but it has not been signed by the EPA due to a nationwide disagreement between DoD and EPA over specific language pertaining to the implementation of institutional controls. The design for Site FT-41 is complete and the agencies have agreed to proceed with the cleanup action expecting that the disagreement will be resolved by the time work is completed.

WP-42 Abandoned Bethel Manor Waste Treatment Plant

ERP Site WP-42 is the site of a former WWTP located off base near Bethel Manor, Langley's off base housing complex. The site was a domestic sewage treatment plant that serviced Bethel Manor Housing from the late 1940s to 1968. The WWTP was a secondary treatment facility that used an activated sludge process. The plant was also equipped to disinfect final effluent before

discharge to surface waters. In 1968, all sewage was discharged to the publicly owned treatment works.

The site was originally identified in 1981 during the IRP Records Search, but it was not included in the IRP at the time, and no further investigations were conducted. In 1992, an eight-man survey team did not find the site or any remnants of the site. After being transferred and sold, the site became part of the Formerly Used Defense Site (FUDS) program. The base sent EPA Region III a letter in November 1999 explaining the property transfer, and Site WP-42 is considered closed.

ST-48 Abandoned Fuel Tanks, Abandoned Bethel Manor Service Station, Building 1795

ERP Site ST-48 is the site of a former gas station covering approximately 0.1 acre in Bethel Manor, Langley's off-base housing complex west of the base on State Route 134. The site includes the abandoned underground fuel tanks beneath a parking lot in front of the fire station and medical clinic (Building 1795) located at Fifth and First Streets in Bethel Manor. Site ST-48 is almost entirely covered by concrete, with a drainage ditch running east/west to the north of the fire station. The gas station was previously known as the Capehart Service Station and was in use from 1964 to 1984.

A drawing dated 1964 indicates that six USTs existed at this site at that time. Four 6,000-gallon gasoline storage tanks were located under the parking lot in front of the present fire station. Two of the 6,000-gallon tanks were designated for future use in the drawing and were apparently never put into service. A 550-gallon waste oil storage tank was located between these tanks and the building, and a 1,000-gallon fuel oil tank was located behind Building 1795. Plans for the refurbishment of the gas station building and an extension to incorporate a fire station garage at the site (dated 1983) show two other large USTs at this site that are not shown on the 1964 drawing. The first of these tanks is located underneath the fire station garage, and the second tank is located on the southern side of the four 6,000-gallon tanks. Thus, there may have been as many as eight USTs at this site prior to 1983.

The refurbishment plans indicate that at least five of these tanks were either removed or filled with water and abandoned after 1983. The tank located under the garage has apparently been removed. Three of the five large USTs in front of the building have been filled with water and abandoned. Prior to its removal in November 1994, the 550-gallon waste oil tank reportedly received unknown quantities of waste chemicals, such as waste oil, paints, and thinners.

Analytical results in 1997 indicated that petroleum contamination existed at the site; contractors completed a RD, RA, and Long Term Operations and Maintenance at the site. Groundwater monitoring continued through December 1998.

After reviewing a limited risk assessment on August 11, 1999, VDEQ provided a letter of no further action required, and Site ST-48 is considered closed.

ST-49 Abandoned Fuel Tanks, Building 351

ERP Site ST-49 consists of underground fuel tanks beneath an asphalt area northwest of Building 351 in the south-central portion of the base. The site consists of two out-of-service 10,000-gallon underground fuel tanks that, according to base personnel, contained heating oil and may have leaked prior to being taken out of service.

Both tanks are still in place, although no longer in use. The tanks are located on the north side of Building 351, the aircraft maintenance shop. Each tank has a fill port and two large access ports (approximately four feet in diameter). The site is situated immediately adjacent to the active flight apron.

Minimal levels of contamination were identified in a SI in 1992. VDEQ issued a closure letter on July 24, 1996, and Site ST-49 is considered closed.

ST-50 Abandoned Fuel Tanks, Base Hospital, Building 257

ERP Site ST-50 includes four underground fuel tanks located behind the base hospital (Building 257) in the south-central portion of the base. In 1973, the back portion of the hospital was extended. As a result, an UST (size unknown) was relocated further away from Building 257, beneath a parking/turning bay in the paved area behind the hospital. This tank was replaced in 1987 or 1988 with a 10,000-gallon tank. A vent pipe and a fill port indicate the present location of this tank. Hospital maintenance staff has indicated that this UST is used to store diesel fuel. There are also two abandoned 500-gallon USTs at this site beneath the area immediately in front of the Infectious Waste Storage Building (Building 264). Two fill ports at this location indicate the position of these tanks. There are reports of incidents where diesel fuel and other products have been accidentally introduced into the 500-gallon tanks in recent years.

In 1997 and 1998 the base monitored the wells and found no free product. The last UST was removed in 1998, and VDEQ issued a closure letter for the site. A DD with site history was signed by VDEQ on March 26, 1999, and Site ST-50 is considered closed.

OT-51 Abandoned Electrical Substation, Shellbank Area, Building 82

ERP Site OT-51 is an abandoned electrical substation located next to Building 80 at the intersection of Nealy Avenue and Burrell Street in the southern part of the base. PCB-containing electrical equipment was in service at the substation. The site was originally identified when PCB contamination was detected in the base storm sewers in May 1990. Transformer oil spillage from the transformers, which were formerly located in the substation, was identified as a likely source.

An IRA in 1997 removed the Aroclor 1260 (a common PCB mixture) contaminated soils. The RI ad PP were completed in 1998, and a ROD for no further action was signed on January 14, 1999. Site OT-51 is considered closed.

SS-52 Fuel Saturated Area, Building, 1301

ERP Site SS-52 is a fuel-saturated area covering approximately 0.1 acre northwest of Building 1301 (Golf Course Maintenance Building). The site consists of one above ground storage tank, a fuel pump, and an UST. These facilities are used to store gasoline and to provide fuel for golf carts and golf course maintenance vehicles. The area was also formerly used as a bombing practice range, probably during the 1920s. Several practice bombs have been unearthed in this area.

In February 1998, the base removed two USTs. Monitoring wells were properly abandoned; a tank closure report was submitted to VDEQ, and they in turn issued a no further action letter on June 1, 1998. The DD with site history was signed by VDEQ on December 14, 1999. Site SS-52 is considered closed.

ST-53 Septic Tank, Golf Course Maintenance

Site ST-53 is the same as Site ST-35. All investigations and remediations will be conducted under the Site ST-35 identification. Site ST-35 is considered closed, and so Site ST-53 is considered to be closed.

OT-55 Civil Engineering Yard, Underground Petroleum Contamination

ERP Site OT-55 includes underground petroleum contamination beneath a paved storage yard covering approximately 2.5 acres directly east of Building 633 at the edge of the Back River in the southeastern portion of the base. Building 633 used to be a sea plane hangar from the 1920s to the 1950s, and the concrete ramp that led to the Back River still exists approximately 4.5 feet underground. This area was progressively expanded by dumping fill material into the Back River in front of the sea plane hangar from the early 1950s to the 1960s. The area was used throughout that time for storing various vehicles and materials, possibly including liquids in pits.

In 1992 the base conducted an IRA to remove the approximately 750 cubic yards of petroleum contaminated soil in the vicinity of the new electrical substation. The soil was disposed of at an off-site solid waste landfill, and the excavated pit was back filled with clean material. The draft SI was published in February 1996, and the site was in the RI phase from 1998 to 1999.

The final RI was submitted on March 6, 2001; a FS was not required due to the No Action PP completed in June 2002. The next step will be completion of the ROD.

OT-56 480th RTG, Building 23 and Silver Contamination in Storm Sewers, Basewide

ERP Site OT-56 is basewide silver contamination in the storm sewers. The site consists of all base storm sewers, including those formerly associated with Site SS-03. The storm sewer contamination component of Site SS-03 is being investigated and remediated as part of the work planned at Site OT-56.

Elevated levels of silver were observed periodically in the storm and sanitary sewer outfalls, as evidenced by required periodic sampling. The site was in the RI and FS phase from 1995 to 1999. Sewer sampling was completed in November 1997, and results showed little or no sediment in the sewers. A screening risk assessment was prepared for each of the 29 outfalls and submitted on April 19, 1999. For those outfalls that did not pass the initial screening, a Phase II Ecological Risk Assessment was performed.

Review of the Phase II assessment was completed in September 2000, and the PP was issued for public comment in October 2001. A ROD was submitted in October 2001, but is awaiting signatures from the EPA and the Air Force due to the nationwide disagreement pertaining to institutional controls. The agencies have agreed on the cleanup action and have agreed to proceed with the design expecting that the disagreement will be resolved by the time the work is complete.

SS-61 Old Civil Engineering, Paint Shop Building, 615/Marina Area

ERP Site SS-61 is the former location of the Civil Engineering (CE) Paint Shop, Building 615, in the southeastern portion of the base. The site is a fenced-in gravel area that was used by CE Paint Shop personnel to store paint and solvents. It was also used as a staging area to mix paints and to clean painting equipment. The Old CE Paint Shop was in operation from the 1950s to early 1991. The facility is now used by Morale, Welfare, and Recreation (MWR) for the administration of the Langley Yacht Club.

In 1993 the base removed an UST and some of the surrounding soil; they encountered creosote-treated pilings, paint containers, and other refuse. The site was in the RI phase from 1995 to 1997. A final ROD was signed on September 27, 1999, and the site is considered closed with land use restrictions.

The ROD requires the following:

- A Land Use Control Implementation Plan (LUCIP),which requires an annual inspection (completed every September since 2000);
- A site survey (completed);
- Public awareness training (completed); and
- A Memorandum of Agreement for Land Use Controls (MOALUC). The final MOALUC was submitted for signature on May 15, 2001, however it has not been signed due to unresolved issues on the language of the MOALUC regarding institutional controls.

SS-62 Petroleum Spill, Adjacent to the Demolished Mile-Long Building

ERP Site ST-62 is located between the Back River and the southernmost portion of the former "Mile-Long" Building. The presence of suspected petroleum contaminated soil in this area was first discovered during excavation of a trench in May 1997.

The base performed additional site characterization and an investigation with NASA on June 17, 1998, which revealed two fuel pipelines in the area. The pipelines were cleaned and abandoned in-place, and two 550 gallon USTs were removed. A tank closure report was submitted on March 25, 1999, and the site was monitored for the next six months.

VDEQ signed a DD for the site on June 14, 2000; the site wells were properly abandoned in 2001, and Site SS-62 is considered closed.

SS-63 Back River Sediments

During investigations, the base collected sediment samples at multiple sites near the Back River. Contaminants, including metals, PCBs, and PCTs, were detected in some of these samples. Interpretation of the significance of these discrete samples was extremely difficult because of the complex migration pathways which may occur in a tidal estuary such as the Back River. Because of this situation, it was determined that the most effective way to characterize the sediment in the Back River was to conduct an investigation that encompasses the entire estuary rather than relying on information from discrete locations near ERP sites.

The base submitted a groundwater modeling report in May 1998, and the final PA/SI report in October 1999. The site moved into the RI/FS phase in 2000. The final work plan was approved May 2, 2001, and the draft RI was submitted August 10, 2001.

Comments on the RI were provided in November 2001, and included issues pertaining to arsenic and PCBs in the fish. The response to these comments is difficult because it is not possible to prove where the fish obtained the PCBs and the arsenic. The level of arsenic is being evaluated as background or from other sources. The PCB concern will be carried forward into the FS.

OT-64 Base Wide Groundwater

The site includes groundwater under Langley. Preparing the initial RODs for the base, it became evident that the requirements for managing groundwater were likely to be similar for all sites. It

was decided by the Langley Partnership to establish the groundwater under all sites as a separate operable unit (OU) rather than trying to document and review groundwater requirements for each individual site. Basewide groundwater was established as a site in 1998.

The base submitted an initial draft monitoring plan in June 1999; it was rejected and the revised plan was submitted in April 2000. The first round of sampling occurred late June to early July 2000. The base installed nine wells in August 2001. These wells, along with 16 existing wells, were developed to reduce turbidity. An analytical report containing results from 73 wells at nearly all sites was submitted in March 2002. This information will be used for a geo-chemical evaluation and report scheduled for Summer 2002.

Petroleum Area PC#96-2288 – Building 380

A new PC# was established by VDEQ for the free product that has been accumulating in the well MW-2 located in the fenced area near Building 380. This area is near the control towers Site ST-26, but because it has a separate PC#, it is managed separately. Since 2000, free product has continued to accumulate in well MW-2. Recovery of the product will continue until the site is cleaned up and approved for closure by VDEQ.

Dorm Site Area of Concern (AOC)

The Dorm Site AOC was discovered in November 1998 while obtaining geotechnical samples for construction of a new dorm site. It is located in an open grassy area northeast of Cedar Avenue and Spruce Street. A brief evaluation of the area with soil and groundwater samples was performed in May 1999 to determine whether or not the AOC requires full investigation. These activities were documented in a SI Report and submitted to VDEQ on June 1, 1999. Four permanent monitoring wells were installed in October 1999. The wells were located where free product was encountered in the temporary wells. Monitoring of the site was completed in 2000; no free product was found.

A DD to formally close the site was submitted to VDEQ and signed on July 26, 2000. The Dorm Site Area of Concern is considered closed, and the wells were properly abandoned in 2001.

Range Area of Concern (AOC)

This area of concern was established in 1999 to investigate past activities associated with a range located in the area of the golf course in the north central portion of the base. A Range Inventory project has been funded through Air Combat Command, but is a separate effort from the plans to study the range on Langley AFB.

AOC-66, Building 726

During the preparation of the demolition of the mile long building in January 2000, a septic tank and leach field associated with Building 726, a former jet engine test cell, were found. The initial sampling of the sludge in this tank exceeded maximum contamination levels (MCLs) for some metals, pesticides, and herbicides. During the septic tank removal, medical debris and spent munitions were found. Sampling of the soil at the leach field identified the material as hazardous waste. Potential exposure pathways from the site include contact with groundwater and soil from recreation activities near the Back River. There is also a potential for ecological risk due the proximity of the site to the river.

A PA was conducted from September 14 through October 15, 2001. Fieldwork for the SI occurred in May 2002. The results of the sampling will be incorporated into a draft SI report scheduled for September 2002.

AOC-67, Building 728

During the preparation of the demolition of the mile long building in January 2000, a septic tank and leach filed associated with Building 728 were found. The initial sampling of the sludge in this tank exceeded MCLs for some metals, pesticides, and herbicides. During the septic tank removal, medical debris and spent munitions were found. Potential exposure pathways from the

site include contact with groundwater and soil from recreation activities near the Back River. There is also a potential for ecological risk due the proximity of the site to the river.

Two aboveground storage tanks at Building 728 were abandoned in October 2000. The Tank Closure Report was filed with the VDEQ and no further activities are required in association with the tanks at this site. The PA was conducted from September 14 through October 15, 2001. The fieldwork for the SI occurred in May 2002. The results of the sampling will be incorporated into a draft SI report scheduled for September 2002.

AOC-68 Former Jet Engine Test Cell

During the preparation of the demolition of the mile long building in January 2000, a former jet engine test cell was found. No sampling has been accomplished at this AOC; however, during the removal of nearby septic tanks at former Buildings 726 and 728, spent munitions were found. In addition, there is the potential for the presence of hazardous materials associated with a jet engine test cell such as VOCs, and metals. Potential exposure pathways from the site include contact with groundwater and soil from recreation activities near the Back River. There is also a potential for ecological risk due the proximity of the site to the river.

The PA was conducted from September 14 through October 15, 2001. The fieldwork for the SI occurred in May 2002. The results of the sampling will be incorporated into a draft SI report scheduled for September 2002.

AOC OT-69 Mile Long Building

This AOC is located on the far eastern end of the base near the Back River. In late 2001, funding was requested for a PA/SI for this site. A contract is ready for award pending availability of funds. Details on the history of the AOC and potential contaminants will be presented after the PA is completed.

AOC LF-70 Landfill Near Building 25

This AOC is a landfill located near Building 25. In late 2001, funding was requested for a PA/SI for this site. A contract is ready for award pending availability of funds. Details on the history of the AOC and potential contaminants will be presented after the PA is completed.

3.0 COMMUNITY OUTREACH

This section of the CRP profiles the communities surrounding Langley and reviews the concerns and issues these communities have raised regarding the base.

3.1 Community Profile

The Hampton Roads area, which is located at the mouth of the Chesapeake Bay, has a population of more than 1.5 million. The Virginia Peninsula is located in the northern part of the Hampton Roads area. The Virginia Peninsula is situated between Williamsburg and Norfolk/Virginia Beach, between the deep-channeled James and York Rivers, and the Chesapeake Bay. The Peninsula, which includes Langley, is comprised of the cities of Hampton, Newport News, Poquoson, and Williamsburg, and the counties of James City and York. The population on the Peninsula includes:

	Population
Hampton (55 square miles)	146,450
Newport News (68 square miles)	180,150
Poquoson (17 square miles)	11,500
Williamsburg (9.3 square miles)	12,000
York County (108 square miles)	56,000
James City County (9 square miles)	50,000
Total	**456,100**

The City of **Hampton** is home to Langley, the NASA Langley Research Center, and Fort Monroe. The City has a thriving convention business that is centered on the Hampton Coliseum. Since its opening in 1992, the Virginia Air and Space Center has helped increase Hampton's share of the regional tourism market. Among Hampton's manufacturers are Gateway Computers, Jay Plastics, Inc., a maker of heat-sealed vinyl products, HowMet Engineering that is casting parts for the F-22, and Catalina Cylinders, which makes high pressure aluminum gas cylinders used as fire extinguishers and in the beverage and medical industries. Hampton is consistently ranked highly for quality of life in national and local publications. A large retired military population resides in Hampton.

The City of **Newport News** is home to Northrop Grumman Newport News, the world's largest private shipyard and the state's largest employer. To weather potential military cutbacks, this manufacturer of nuclear-powered submarines and aircraft carriers has diversified its business and now includes more civilian work, such as building foreign oil tankers. After years of construction, the Continuous Electron Beam Accelerator Facility (CEBAF) opened in Newport News in 1994, making the city a center for subatomic research. Other major employers in Newport News are the Fort Eustis Army Transportation Center and a Siemens Automotive fuel injector plant.

The City of **Poquoson**, a suburban city, draws residents looking for a rural lifestyle and an excellent education system. Poquoson lies near the water, accounting for its largest industry - seafood. The city has 60 miles of shoreline. The city encompasses less than 17 square miles; wetlands comprise 54 percent of its land. The Plum Tree Island National Wildlife Refuge, along with the privately owned salt marsh, make up the largest saline marsh in the lower Chesapeake Bay. Much of the land in Poquoson was originally farmland. Its residents, who tend to work in neighboring cities and counties, typically have the region's highest median income.

Langley lies between the northwest and southwest branches of the Back River, a tidal estuary of the Chesapeake Bay. The City of Hampton borders the base to the south and west. The City of Poquoson is located northeast of the base, across the northwest branch of the Back River. The City of Newport News is located west of Langley.

Langley is the chief employer in the area and enjoys an excellent relationship with the surrounding community. The base, which is home to approximately 7,600 military, and 2,100 civilian personnel, had an economic impact on the local community of more than $506 million in 2000.

Hampton Roads is one of the world's busiest ports. Because of its large natural deep-water harbor, the area leads the nation in foreign exports and is host to one of the largest concentrations of military power in the nation. The area is home to the NASA Langley Research Center, the

world's largest Navy base (Yorktown Naval Weapons Station) and CEBAF, the country's premier physics research laboratory.

The Greater Hampton Roads Area has the highest concentration of active military personnel in the country. The military installations are considered good neighbors by many residents because of their involvement in the community, the favorable economic climate they create, and the significant local service they provide to area residents.

Two of the region's oldest industries--seafood and agriculture--continue to thrive. Virginia is one of the nation's largest seafood-producing states and much of the catch comes from the waters around Hampton Roads. Although the number of farms in the region has dropped over the years, the region's five agricultural counties and three farming cities produce significant yields.

Although the port, the military, the services industry, and the tourism industry are the traditional anchors of the region's economy, the area has attracted growing numbers of manufacturers, financial services firms, and distributors in recent years. The regional economy consists of seven main sectors:

- Services Industry (including tourism);
- Retail and Wholesale Trade;
- Government (many jobs at military bases);
- Manufacturing (including shipbuilding);
- Construction;
- Public Utilities/Transportation/Communications; and
- Finance/Insurance/Real Estate.

Most Hampton Roads residents are in the middle class, with a median household income of $40,114. The 2000 census showed that 62% of the area residents were Caucasian, 30% were African American, and the remaining population was made up of other races. Among the Region's diverse ethnic communities are residents of Asian, Indian, and Hispanic decent.

Water service for the cities of Hampton and Poquoson is provided by the Newport News Waterworks. Most residents close to Langley are connected to the municipal water supply, except for a small number of homes in Poquoson that obtain water from private wells.

The Back River is used for shellfish harvesting, fishing, and other recreational purposes. The Plum Tree Island Wildlife Refuge is located approximately 2 miles to the northeast of Langley, and a natural preserve (Grandview Park) is located approximately 3 miles to the east. Seven parks (four in Hampton and three in Poquoson) are located within 2 miles of the base.

Most of the land use surrounding Langley is residential and commercial, with some industrial activity in Hampton. Langley shares its northwestern border with the NASA Langley Research Center (NASA LaRC). The NASA LaRC functions as a separate installation and is a separate federal agency; as such it has its own environmental restoration program and funding. In addition, NASA still occupies several buildings on Langley property and is one of the base's largest tenants. Other major tenants of the base include the 480th Intelligence Group, HQ ACC, and NASA.

3.2 Community Interview Responses

To identify the concerns and preferences of local residents, community interviews were conducted at Langley during April 2002. The interviewees included citizens, Langley employees, and members of the business, environmental, and political community. Most of the interviews were held at private homes or at places of employment. Some interviews were conducted by telephone due to logistical and scheduling constraints. Twenty-two interviews were conducted for the update of this CRP.

Each interview consisted of 45 predefined questions grouped into 22 parts. A summary of the interview responses is provided below. The complete data from the interviews is provided in Appendix F.

Q1: How long have you lived in this community?

A1: All of the interviewees had considerable familiarity with the community. Fourteen respondents had lived in the area for 10 years or longer, and only one resident had lived in the area for less than 2 years.

Q2: What issues have received the most attention locally? How sensitive is the local area to environmental issues on a scale from 1 to 5? What do you think is the most important environmental problem facing the community today?

A2: Development, traffic, taxes, and crime were cited as the issues that received the greatest attention. Other answers included education and jet noise. Most respondents considered the community to be fairly sensitive to environmental issues, with 20 of the 22 respondents giving a rating of "3",, or greater (1 being not sensitive; 5 being very sensitive). Nine of the interviewees said that the most important environmental issue facing the area was water quality, although other topics, such as wetlands protection, noise, and loss of green space were also mentioned.

Q3: Who do you consider to be leaders in the community?

A3: Most interviewees cited their City Council members, City officials, and base leadership as the leaders of the community.

Q4: Have you or any of your relatives ever worked at Langley?

A4: Of the seventeen interviewees who were not currently employed by the base, four had either worked at the base or had relatives that did.

Q5: How close do you live to Langley? What are your thoughts about having Langley as a neighbor?

A5: Of the seventeen interviewees who were not currently employed by the base, twelve live within 3 miles of the base, and only one lives more than 10 miles from the base. Among these seventeen respondents, fourteen thought Langley was a good or great neighbor. Two respondents were neutral, and only one was negative about the base's presence. Of the 16 interviewees that were positive or neutral about the base, nine did mention that although they understood the need, it was difficult having such a "noisy" neighbor at times.

Q6: Do you or any of your family members participate in any outdoor recreational activities in or around Langley, and if so, what types and where?

A6: Thirteen of the twenty two interviewees answered positively to this question. The types of activities included: boating/sailing, fishing, use of the parks, golfing, hunting, and numerous other activities.

Q7: Do you feel that you have a good understanding of Langley's activities and its operations? How or where have you received most of your information about Langley's environmental activities?

A7: Fifteen of the interviewees felt they had a good understanding of Langley's operations. Another five of the respondents felt somewhat familiar with Langley's operations. Most of the respondents cited the CEVR Fact Sheet or local media (e.g., the Daily Press or the Flyer), as their main sources of information about environmental activities at the base. Other sources of information included environmental groups, newsletters, and word-of-mouth.

Q8: In your opinion, how does the public typically perceive the presence of federal and state regulatory agencies in the area? What organizations or individuals do you consider to be most credible when it comes to environmental issues?

A8: Five respondents commented that the regulatory agencies were viewed in a negative way because they were perceived as meddlesome, or had misdirected efforts. Nine respondents had either mixed feelings or were not sure of how the community perceived regulatory agencies in the area. Four commented that he/she "...was glad they were here", and two felt they didn't act strongly enough. In spite of these responses, eight respondents stated that they felt EPA was among the most credible agencies for environmental issues. Other credible organizations included environmental groups and groups formed in support of the Chesapeake Bay.

Q9: Prior to this conversation, were you aware that Langley is on EPA's Superfund list? When did you first become aware of environmental problems at Langley? How did you become aware? What do you know about environmental problems at Langley?

A9: Fourteen of the twenty-two interviewees were aware of Langley's status as a Superfund site, and four respondents stated that they had only become aware of environmental "problems" at the base as a result of the community relations interview itself. Most of the interviewees became aware of environmental problems at the base either through their work, by reading articles in a newspaper, or from reading the CEVR fact sheet. Seven of the respondents, when asked what they knew about environmental problems at the base, stated "not much." Others mentioned a vague awareness of fuel spills, toxics disposal, and noise pollution over the years.

Q10: Do you think residents in the community believe that their health, or their children's health, may be affected by Langley? What do you believe?

A10: Thirteen of the interviewees stated that they did not think that residents of the community believe that their health, or their family's health, might be affected by operations at Langley. Five of the respondents thought that operations at Langley could impact their health; noise was cited several times for contributing to chronic sleep loss. Four respondents were not sure what the community believed the impact of the base is on their health; but 14 did not believe their own health was affected by Langley's operations.

Q11: Who would you turn to if you had health concerns?

A11: Four of the five of the on-base respondents stated that they would turn to an organization on the base, while only four of the 17 respondents from off-base stated that they would turn to an organization on the base. Of the other off-base respondents, five said they would go to a doctor or to the local health department, eight said they would contact a state or local official, and the others said they were not sure or would go to the EPA.

Q12: Have you had any problems that you think are attributable to Langley? Do you have any current concerns about the base?

A12: None of the twenty-two interviewees said that they had any problems that they attributed to Langley. However, five of the respondents said that they had some concerns with the base. These concerns were either about safety and noise issues since September 11 2001, or were related to being on the Superfund list; keeping fuel in aboveground tanks; or concern over people working in moldy areas.

Q13: Are Langley officials perceived as credible and responsive to public problems?

A13: Seventeen of the interviewees gave a positive answer to this question; four were not sure and only one respondent replied negatively. In keeping with the generally positive view of Langley by the community, they trust the base to "take care" of the needs of the community.

Q14: In terms of involvement in the community, have you participated in any public hearings/meetings? If so, what were the issues? Do you participate in any civic organizations, and if so, which ones?

A14: Twelve interviewees said that they had participated in some type of public meeting in the past. In most cases, those who responded positively to this question were individuals who offered multiple subjects for the meetings they had attended. Eight of the twelve interviewees who had attended meetings had gone to meetings relating to environmental, conservation, or land-use topics. Thirteen of the interviewees said that they participate in some type of civic organization, including the Kiwanis, Scouts, as well as civic associations such as the PTA, environmental groups, NAACP, shelters, their church, and neighborhood watch groups.

Q15: What is your opinion of the government's commitment to cleaning up hazardous waste?

A15: Eighteen respondents supported the government's commitment to cleaning up hazardous waste. Several respondents said that they felt the government meant well, but that their methods needed changing. The remaining four respondents either did not believe that the commitment was there or that it was so slow or variable that it effectively was absent.

Q16: Have you participated in activities at Langley? If so, which activities?

A16: Fifteen of the interviewees said that they had participated in activities at Langley. Most of these activities involved recreational or social events, but some respondents had participated in other activities, such as Clean the Bay Day.

Q17: How would you like to be involved in future cleanup response activities? How do you want to receive information about cleanup activities? How frequently? What information would you like?

A17: Sixteen respondents wanted to receive information about future cleanup activities. Two respondents did not want to be involved at all. One interviewee said he/she was already involved.

Eleven respondents felt that the CEVR Fact Sheet would be the best vehicle for getting information about cleanup activities at the base. Seven respondents thought a website or emails would be helpful. Only three respondents cited local media, newspaper, or television/radio as their preferred means of getting information. Fourteen respondents wanted information on a monthly or quarterly basis; others wanted information less often, in the form of an annual or biannual status report.

Respondents said they wanted general, understandable information about progress that is made as a cleanup progresses at Langley. The status of water and air quality, pollution prevention successes, and opportunities to volunteer were other topics cited by the interviewees.

Q18: How can Langley best provide information concerning response activities to the community? What would be the best location for community meetings? What would be the best location for an information repository?

A18: Again, the CEVR Fact Sheet was the first choice as the most effective means for distributing information about the cleanup activities at the base. Newspaper, television, and the internet were also suggested. Eight of the respondents identified the Hampton Library for public meetings. Other locations, such as schools, recreation/community centers, and government buildings were also recommended. Nine respondents thought the best place for an information repository would be a library; eight other respondents identified a website as an appropriate location.

Q19: Langley has convened a Restoration Advisory Board (RAB) to enhance understanding and dialogue with its communities. Would you be interested in attending such a meeting? Who would you to like to see represented on the RAB?

A19: Ten respondents said that they would be interested in attending a RAB meeting. Another five respondents were not sure, and seven did not have any interest in attending such a meeting. Many of the interviewees provided examples of who they felt should be represented on the RAB, which included: Wing and Group Commanders, Environmental Restoration Element personnel, more citizens, city council members, civic association members, technical experts, parks and recreation personnel, and others.

Q20: What are your primary sources of information about the community? What newspapers do you read? Which TV stations do you watch? Which radio stations do you listen to for community news?

A20: More interviewees said they got information about their community from reading the newsletters and fact sheets than from the newspaper. Eighteen of the interviewees read the Daily Press. Some read the Virginia Pilot, while most of the other local papers were cited by at least one interviewee. Other important sources of information cited were television news, word-of-

mouth, the library, Hampton City Website, and the radio. Most interviewees cited one or more of the three national network television stations as their source of television news. Many interviewees said that they did not listen to the radio for news but for pleasure. Those that did listen to the radio for news often cited National Public Radio as the station of choice.

Q21: Do you feel that the media in this area does an adequate job of covering environmental issues? Do you feel the media has accurately represented your concerns?

A21: Although 16 of the respondents answered the first part of this question positively, six of them said only somewhat. This sense that the media could do a better job reporting on environmental issues was further supported by the responses to the second part of the question. Eight of the 22 individuals did not think the media accurately represented their concerns.

Q22: Can you suggest other individuals or groups that should be contacted for additional information?

A22: Many of the interviewees provided suggestions for others who could be contacted to participate in the interview process or be placed on the mailing list to receive information about cleanup activities and community outreach activities. Organizations such as the Friends of Sandy Bottom Park, Clean City Commission, and the Newport News City Council were recommended. In addition, numerous private citizens were named.

3.3 Community Issues and Concerns

The responses to the Langley interview questions in April 2002 echoed similar concerns with regard to water pollution as those expressed in the original November 1992 and October 1996 interview efforts. These individuals believe that Langley is doing a good job environmentally and that if there were any problems, they would trust the base to handle them properly. It was apparent that this seeming lack of concern was less apathy than it was a positive feeling about Langley in general.

Two other issues, were also expressed in the 2002 interviews. These issues are: (1) the increased noise from the base; and (2) the slow pace of cleanup. Because the jet noise is directly attributable to the events of September 11, 2001, it contributes to a general concern about safety and the state of the world. A sense that the government, no matter how well-intended, is not cleaning up as quickly as they could due to the bureaucratic nature of the process was expressed. While many of the interviewees stated that water pollution was an issue, the local population is largely comprised of residents who have benefited directly from the presence of Langley; these residents are more concerned with the increased jet activity from the base and larger environmental issues that are beyond base control, such as loss of green space and over development.

There were a number of other concerns expressed during the 2002 interview process. They were as follows:

- Slow pace of base cleanup activities;
- Impacts of base operations on the Back River and the Chesapeake Bay;
- Impacts of base operations on air quality;
- Litter and dumping activities in the area; and
- Overpopulation/development and loss of green space.

4.0 HIGHLIGHTS OF THE COMMUNITY RELATIONS PROGRAM

This CRP is designed to facilitate community education and participation in the Superfund/ERP cleanup process. To be effective, Langley's community relations efforts will be gauged according to the community's needs for information, its interest, and its willingness to participate in the process. Section 5.0 presents the specific actions the base will undertake in its community relations program. A summary of the strategies that will be used to enhance communication between Langley and its surrounding communities is presented below.

1. Enlist the support of local officials and interested members of local groups, such as civic associations, environmental groups, and business groups, in community relations activities.

2. Educate area residents and local officials about the procedures, policies, and requirements of the Superfund/ERP program. Langley will make an effort to circulate information describing the Superfund/ERP process to the community. This information will include a description of the phases of the process and updates on progress made in the Langley remediation effort.

3. Provide information on the specific environmental challenges at Langley, including previous efforts and PPs. Information will be distributed to interested parties, which will allow them to provide meaningful input on decisions. Communication efforts may include: site tours and briefings, fact sheets/mailings, press releases, education to base residents regarding areas of concern, and RAB meetings.

4. Concise and easily understood information and project updates will be provided to interested parties on the schedule of technical activities, their purpose, and their outcome.

5. Solicit input from anyone who could be impacted by remedial decisions. People to be contacted will include: local and state officials, commercial fishers, base residents, adjacent property owners, and interested local citizens. This approach will prevent delays in the project in the long run and will allow those involved in the decision-making to feel ownership of The final decision. It will enhance relations and prevent future liability.

5.0 COMMUNITY RELATIONS ACTIVITIES

The community relations program at Langley was designed in accordance with EPA policy and guidance for conducting community relations activities and with Air Force Logistics Command Public Affairs Environmental Guidance. Information gathered through a review of published literature and the community interview process has been incorporated into this program, which is tailored to meet community needs. The specific components of this program have been developed to emphasize the following needs:

- Providing the community with timely and accurate information about the Langley sites under investigation;
- Promoting two-way communication between Langley and its surrounding communities; and
- Encouraging community involvement.

The Langley community relations program is summarized in Table 5-1. The coordination of the various activities outlined in this section with the steps in the Superfund process is presented in Table 5-2.

5.1 Provide Timely and Accurate Information

Langley will ensure the release of timely and accurate information through the development of a CEVR web page; creation of a mailing list for interested parties; the maintenance of an information repository and Administrative Record, where the public has access to site-specific information; and the development of news releases, public notices, and fact sheets. These activities are discussed in more detail below.

Table 5-1

Langley Community Relations Activities and Lead Offices

Community Relations Activity	Frequency	Lead Office
Mailing List	Update as needed	Environmental Restoration Element
Information Repository	Add new material as generated	Environmental Restoration Element
Non-Technical Summaries	Three weeks after each technical report is issued	Environmental Restoration Element
Speakers Bureau	As requested	Public Affairs
Community Meetings	As needed	Environmental Restoration Element
Public Comment Period	At required decision points for response actions	Environmental Restoration Element/Public Affairs
Responsiveness Summary	At close of public review period	Environmental Restoration Element
News Media Coordinator	Full-time	Public Affairs
Community Relations Plan Review	Annually	Environmental Restoration Element/Public Affairs
Community Relations Plan Implementation	Ongoing	Environmental Restoration Element
Fact Sheets	As needed	Environmental Restoration Element
Restoration Advisory Board	Semi-annually	Environmental Restoration Element
Contact with Key Public Officials	As needed	Environmental Restoration Element/Public Affairs
Public Notice	Before and after response action selection	Public Affairs/Environmental Restoration Element
Community Interviews	Prior to development of CRP Prior to revision of CRP	Environmental Restoration Element
Additional Informational Materials	As required	Public Affairs
Administrative Record	Ongoing	Environmental Restoration Element/Judge Advocate General

Table 5-2

Schedule of Langley Community Relations Activities

Community Relations Technique	PA	SI	RI	FS	ROD	RD	RA	Site O&M	SC
Community Relations Plan (CRP)			*	*	*	*	*	+	+
State and Local Official Contact	*	*							
Citizen Contact	+	*	+	+	+	+	+	+	+
Community Interviews			*						
Mailing List	+	+	+	+	+	+	+	+	+
Information Repository			*	*	*	*	*	*	*
Administrative Record	#	#	*	*	*	*	*	*	*
Public Meetings				*		#	#	#	
Fact Sheets	+	+	*	*	*	*	*	*	+
News Releases			#	#	#	#	#		
Public Notices				+	*	+	+		
Public Comments Period					*				
Responsiveness Summary					*				

PA = Preliminary Assessment
SI = Site Inspection
RI = Remedial Investigation
FS = Feasibility Study
ROD = Record of Decision
RD = Remedial Design
RA = Remedial Action
O&M = Operation and Maintenance
SC = Site Closeout
* = Federal Requirement
+ = Recommended Activity Based on Citizen Comments
# = Air Force ERP Suggested Activity

5.1.1 Development of a Web Page/Use of Email

Langley will develop and maintain a web page that will be available to the general public via the Internet. The web pages will include basic information about the ERP, site specific information, and may eventually include a copy of the Information Repository. In addition, the base will utilize email whenever feasible to enhance and improve the efficiency of providing periodic updates to interested parties.

5.1.2 Create Mailing List

Langley will maintain a mailing list of the elected officials, civic organizations, public interest groups, citizens, residents, agency representatives, and news media in the areas around Langley. This list will be used to distribute updates with regard to sites under investigation via fact sheets and other informational materials, as available. Periodic updates will be made to the mailing list to ensure that Langley is reaching all interested and concerned parties. Opportunities to be included on the mailing list also will be provided at the information repository.

5.1.3 Maintain Information Repositories

Technical reports and other pertinent information regarding past and current ERP activities at Langley are stored at the Hampton Central Library. The information repository will be updated as additional pertinent information becomes available. The location and business hours for the information repository are listed in Appendix E.

5.1.4 Maintain Administrative Record

In accordance with CERCLA Section 113, Langley has developed an Administrative Record. This formal record contains all documents used by Langley in the site discovery, investigation, and decision-making process including all documents related to decisions on remedial and removal actions. The CRP is also included in the Administrative Record.

5.1.5 Develop News Releases

News releases may be distributed to effectively reach individuals at Langley and its surrounding communities. Such releases will be distributed when major decisions, updates, or milestones associated with the cleanup process are reached. Appendix C provides a list of the media contact personnel.

5.1.6 Develop Public Notices

The community will be informed of Langley site activities through public notices and advertisements in several media. At a minimum, advertisements will be placed in The Flyer and The Daily Press to announce the following activities:

- Release of Engineering Evaluation/Cost Analysis (EE/CA) to the community;
- Initiation of public comment period for the PP for the ROD at each site;
- Establishment of the FFA;
- Development of the PP for each site at which a cleanup alternative is proposed after a ROD has been signed;
- Announcement of a Public Meeting; and
- Adoption of RA that significantly differs from the final remedial plan adopted by the agency.

5.1.7 Develop Fact Sheets

Fact sheets will be used to inform the public of cleanup progress at Langley, to address ongoing issues of concern, such as potential effects of contamination on public health and the environment, and to present alternatives under consideration for site cleanups. Additionally, fact sheets may announce upcoming community meetings and public comment periods, and may provide opportunities for readers to sign up for the mailing list.

5.2 Promote Two-Way Communication

Communication of Langley ERP activities to the public will be accomplished by convening the RAB, conducting small group meetings, establishing contacts with key community members and public officials, conducting community interviews, and revising the CRP to reflect changes in community concerns and needs. These activities are discussed in more detail below.

5.2.1 Convene Restoration Advisory Board

The RAB is designed to be a forum to enhance communication between DoD facilities and their surrounding communities. Although the RAB does not have any formal decision-making authority, it is intended to provide a regular opportunity for the public to hear about the progress of site cleanups and to discuss their questions, concerns, and suggestions relating to the base's environmental restoration efforts.

5.2.2 Conduct Small Group Meetings

Small group meetings will be conducted as needed to allow individuals to express concerns, ask questions, and clear up any misconceptions or misunderstandings about Langley ERP activities. Presentation topics may include an overview of the investigation and cleanup process, or an update on recent developments. Civic organizations, public interest groups, or other interest groups could request such a meeting.

5.2.3 Establish Key Contacts

Contact will be maintained with key members of the community, such as members of environmental and business groups, civic association leaders, and key local government contacts. This contact will be maintained through the use of email, conventional mail, and through telephone calls.

5.2.4 Conduct Community Interviews

As required by CERCLA, Langley conducted community interviews in November 1992, October 1996 and again in April 2002. To date, more than 60 interviews have been conducted. The objective of the interviews is to better understand the concerns of the community so that a CRP can be tailored to address these concerns. Methods for distributing information to the public and providing opportunities for the community involvement are also discussed during the interviews.

5.2.5 Revise Community Relations Plan

All or part of the CRP may require revisions to incorporate new information or to respond to changes in community concerns and needs. The CRP may also be revised as a result of a major change in the environmental cleanup program at Langley. It is appropriate to reassess the nature of community concerns and develop a new schedule of community relations activities on a regular basis.

5.3 Encourage Community Involvement

Community involvement at Langley will be encouraged by conducting public meetings holding public comment periods for key technical documents, preparing responsiveness summaries (to officially respond to the public comments), and encouraging Technical Assistance Grant (TAG) applications (to assist the public in assessing information provided by the base). These activities are discussed in more detail below.

5.3.1 Conduct Public Meetings

Public meetings at Langley will occur at key technical milestones during the cleanup process to provide information and receive comments from the community. These meetings will be

conducted in accordance with ERP policies and applicable federal and state laws. Public meetings will occur at the specific cleanup phases listed below:

- Completion of PP (as part of the ROD) for site cleanup activities;
- Release of Final PP (if significantly different from draft PP); and
- Release of a ROD amendment (if the selected method is significantly different from the original ROD).

5.3.2 Hold Public Comment Periods

Public comment periods will be scheduled to allow the general public to review major technical documents for Langley ERP activities. A public comment period will be announced at least 2 weeks in advance of an event, and again just before the event, using public notices and/or news releases in the newspaper. The technical documents will be available for review at the information repositories, and 30 days will be provided for public review and comment. Public comment periods will be held before each public meeting scheduled for a technical document. During the comment period for a PP for a site cleanup, the review period may be extended for up to an additional 30 days.

5.3.3 Prepare Responsiveness Summaries

Following each formal comment period, Langley will prepare a responsiveness summary to address the questions and concerns expressed by the community. All issues raised during the comment period will be summarized, and a response to each comment will be prepared. The responsiveness summaries will be distributed to members of the RAB, the information repository, and all community members who submitted comments during the comment period.

5.3.4 Provide Technical Assistance Grant (TAG) Information

TAGs are available through EPA Region III to assist the public in assessing the information provided by Langley. Information concerning TAGs, including how to apply for a TAG, will be

provided in the information repository. More information on the TAG program is provided in Appendix G.

Appendix A

Acronyms and Abbreviations

Acronyms and Abbreviations

1 CES/CEV	Environmental Flight
ACC	Air Combat Command
AFB	Air Force Base
ARARs	Applicable, Relevant or Appropriate Requirements
BX	Base Exchange
CAP	Corrective Action Plan
CE	Civil Engineering
CEBAF	Continuous Electron Beam Accelerator Facility
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CRP	Community Relations Plan
DDs	Decision Documents
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Exploded Ordnance Disposal
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ESI	Expanded Site Inspection
FFA	Federal Facility Agreement
FFCA	Federal Facility Compliance Agreement
FFHWCO	Federal Facilities Hazardous Waste Compliance Office

FS	Feasibility Study
GOCO	Government-Owned Contractor-Operated
HQ	Headquarters
HQACC	Headquarters, Air Combat Command
HRS	Hazard Ranking System
HTA	Heavier-than-Air
IAG	Interagency Agreement
IRP	Installation Restoration Program
Langley	Langley Air Force Base, Virginia
LTA	Lighter-than-Air
MSA	Munitions Storage Area
MWR	Morale, Welfare, and Recreation
NACA	National Advisory Committee for Aeronautics
NASA	National Aeronautics and Space Administration
NASA LaRC	NASA Langley Research Center
NCP	National Contingency Plan
NFA	No Further Action
NON	Notice of Noncompliance
NPL	National Priorities List
OU	Operable Unit
OWPE	Office of Waste Programs Enforcement
PA	Preliminary Assessment
PAO	Public Affairs Office
PCB	Polychlorinated Biphenyl
POC	Point of Contact
PP	Proposed Plan

PRPs	Potentially Responsible Parties
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
TAC	Tactical Air Command
TAG	Technical Assistance Grant
UST	Underground Storage Tank
VDEQ	Virginia Department of Environmental Quality
WWTP	Wastewater Treatment Plant

Appendix B

List of Key Contacts and Interested Parties

List of Key Contacts and Interested Parties

1. Langley Points of Contact

Contact for Federal, State, and Local Agencies and Authorities
Richard Jubie
Remedial Project Manager
Langley Air Force Base
1 CES/CEVR
37 Sweeny Blvd.
Langley-AFB, VA 23665
Phone (757) 764 1082
Fax: (757) 764-8615

Contact for Base Residents and Employees, Area Residents, Media, and Elected Officials
Vic Johnston
Public Affairs Office
159 Sweeny Boulevard
Suite 100
Langley AFB, VA
Phone: (757) 764-2018
Fax: (757) 764-3475

2. Federal Elected Officials

George F. Allen, U.S. Senator
Washington, DC Office
204 Russell Senate Office Building
Washington, DC 20510
Phone (202) 224-4024

State Office
One Columbus Center #525
Virginia Beach, VA 23462
Phone (804) 518-1674

John W. Warner, U.S. Senator
225 Russell Senate Office Building
Washington, DC 20510
Phone: (202) 224-2023

State Office
4900 World Trade Center
Norfolk, VA 23510
Phone: (804) 441-3079

Robert C. Scott, U.S. Representative
Washington, DC Office
2464 Rayburn House Office Building
Washington, DC 20515-4603
Phone: (202) 225-8351

District Office
2600 Washington Avenue, Suite 1010
Newport News, VA 23607
Phone: (757) 380-1000

JoAnn Davis, U.S. Representative
Washington, DC Office
1123 Longworth House Office Building
Washington, DC 20515
Phone: (202) 225-4261

District Office
4904-B George Washington Memorial Hwy.
Yorktown, VA 23692
Phone: (757) 874-6687

3. State Elected Officials

Governor Mark Warner
State Capitol, 3rd Floor
Richmond, VA 23219
Phone: (804) 786-2211

Senator Martin Williams (District 1)
910 Capital Street, Room 331
Richmond, VA 23219
Phone: (804) 698-7501

Senator Henry Maxwell (District 2)
910 Capitol Street, Room 428
Richmond, VA 23219
Phone: (804) 698-7502

District Office
P.O. Box 1096
Newport News, VA 23601
Phone: (757) 599-8683

District Office
350 Maple Avenue
Newport News, VA 23607
Phone: (757) 245-2855

91st District
Thomas D. Gear
P.O. Box 7496
Hampton, VA 23666
Phone: (757) 825-1943

94th District
G. Glenn Oder
213 Robin Drive
Newport News, VA 23606
Phone: (757) 930-4456

92nd District
Mary T. Christian
P.O. Box 1892
Hampton, VA 23669
Phone: (757) 723-6060

95th District
Flora Davis Crittenden
P.O. Box 5046
Newport News, VA 23605
Phone: (757) 380-0025

93rd District
Phillip A. Hamilton
P.O. Box 1585
Newport News, VA 23601
Phone: (757) 249-2580

96th District
Melanie L. Rapp
P.O. Box 1529
Yorktown, VA 23692-1529
Phone: (757) 886-1000

4. Local Officials

Hampton City Council

Mayor, Mamie Locke
Vice Mayor, Paige Washington, Jr.

Members: Randy Gilliland
Ross Kearney, II
Joseph Spencer
Turner Spencer
Rhet Tignor

Hampton Clerk of Council
22 Lincoln Street
8th Floor, City Hall
Hampton, VA 23669
Phone: (757) 727-6315

Mr. George Wallace
Office of the City Manager
22 Lincoln Street, 8th Floor
Hampton, VA 23669
Phone: (757) 727-6392

Mr. Billy Joe Roberts
Sheriff of Hampton
135 High Court Lane
Hampton, VA 23669
Phone: (757) 727-6760

Mr. Thomas Townsend
Chief of Police
40 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6510

Mr. Robert Green
Office of the Fire Chief
22 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6580

Mr. Terry P. O'Neill
Director of Planning
22 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6132

Mr. A. Paul Burton
Office of the City Attorney
22 Lincoln Street, 8th Floor
Hampton, VA 23669
Phone: (757) 727-6127

Mr. Ed Novi
Public Communications Officer
22 Lincoln Street, 6th Floor
Hampton, VA 23669
Phone: (757) 728-3501

Poquoson

Mr. Gordan C. Helsel, Jr.
Mayor of Poquoson
710 Poquoson Avenue
Poquoson, VA 23662
Phone: (757) 868-6178

Mr. Christoper E. Claud
268 Little Florida Road
Poquoson, VA 23662
Phone: (757) 868-8369

Mr. W. Eugene Hunt, Jr.
115 Darden Drive
Poquoson, VA 23662
Phone: (757) 868-7628

Mr. Charles Burgess, Jr.
City Manager
500 City Hall Avenue
Poquoson, VA 23662
Phone: (757) 868-3510

Mr. Arthur V. Holloway, Jr.
11 Robert Bruce Road
Poquoson, VA 23662
Phone: (757) 868-9568

Mr. Herbert R. Green, Jr.
12 Evans Circle
Poquoson, VA 23662
Phone: (757) 868-6442

Mr. Roger N. Messler
8 Carriage Hill Drive
Poquoson, VA 23662
Phone: (757) 868-6764

Newport News

Mr. Joe S. Frank
Mayor of Newport News
City Hall Building
2400 Washington Avenue
Newport News, VA 23607
Phone: (757) 926-8634

Edgar E. Maroney
City Manager
2400 Washington Avenue
Newport News, VA 23607
Phone: (757) 926-8411

Council Members:
Vice Mayor, Mr. Charles C. Allen
Herbert H. Bateman, Jr.
William F. Haskins, Jr.
Madeline McMillian
Sharron P. Scott

5. EPA Region III Officials

Stacey Driscoll
Remedial Project Manager
Hazardous Waste Enforcement Branch
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19107
Phone: (215) 814-3368
Fax: (215) 814-3051

Community Involvement Coordinator
Office of External Affairs
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19107
Phone: (215) 814-5532
Fax: (215) 814-3002

6. State Agency Contact

Virginia Department of Environmental Quality

Robert Weld
Federal Facilities
629 East Main Street
Richmond, VA 23219
Phone: (804) 698-4227
(Fax: (804) 698-4383

7. Other State Agencies

Virginia Marine Resource Commission
2600 Washington Avenue
Newport News, VA 23607
Phone: (804) 247-2200

Virginia Institute of Marine Sciences
P.O. Box 1346
Gloucester Point, VA 23062
Phone: (804) 642-7000

Chesapeake Bay Local Assistance Department
805 E. Broad Street, Suite 701
Richmond, VA 23219
Phone: (804) 371-7501

8. Restoration Advisory Board Members

Col Drew Jeter
1 MSG/CC
45 Nealy Avenue, Suite 206
Langley AFB, VA 23665

Mr. Robert Weld
Department of Environmental Quality
Federal Facilities
629 East Main Street
Richmond, VA 23219

Mr. Jim Knipp
409 Fenton Mill Road
Williamsburg, VA 23188

Ms. Stacie Driscoll
USEPA, Region III
1650 Arch Street 3HS50
Philadelphia, PA 19107

Mr. Terry O'Neill
Planning Director
City of Hampton
22 Lincoln Street
Hampton, VA 23669

Mr. John Edwards
Sr. Project Coordinator
Dept. of Planning and Development
2400 Washington Avenue
Newport News, VA 23607

Ms. Tammy Coffey
VDEQ, Remediation Section
5636 Southern Boulevard
Virginia Beach, VA 23462

Mr. Greg Sullivan
Environmental Engineer
NASA, Langley Research Station
5 Hunsucker Loop, Stp. 429
Hampton, VA 23881-0001

Mr. Jeffrey Bliemel, P.E.
Director of Engineering and Utilities
500 City Hall Avenue
Poquoson, VA 23662

Ms. Brenda Sullivan
309 Hercules Court
Hampton, VA 23669

Mr. Gregory Steele
U.S. Army COE - Norfolk District
803 Front Street
Norfolk, VA 23610-1096

Ms. Traycie West
Virginia Marine Resources Commission
ATTN: Habitat Management Division
2600 Washington Avenue
Newport News, VA 23607

9. Area Chamber of Commerce

Ms. Rebecca Gibson
Virginia Peninsula Chamber of Commerce
1919 Commerce Drive, Suite 320
Hampton, VA 23666
Phone: (757) 262-2000

10. Community Organizations

Alliance for the Chesapeake Bay
530 East Main Street, Suite 501
Richmond, VA 23219
P.O. Box 1981
Richmond, VA 23218
Phone: (804) 775-0951

Hampton Wetlands Board
22 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6140

Sierra Club York River Group
P.O. box 11266
Newport News, VA 23601-11266

Hampton Clean City Commission
22 Lincoln Street
Hampton, VA 23669
Phone: (757) 727-6394

Virginia Living Museum
524 J. Clyde Morris Blvd.
Newport News, VA 23601
Phone: (757) 595-1900

Virginia Peninsulas Public Service Authority
#2 Eaton Street, Suite 502
Hampton, VA 23669
Phone: (757) 728-2062

Appendix C

Media List

Television

WTKR TV-3 (CBS)
750 Boush Street
Norfolk, VA 23510
Phone: (757) 446-1352
Fax: (757) 446-1376
DESK@wtkr.com
News Director: John Wessling
Assignment Editor: Stephanie Robertson
Military Beat: Stephanie Sy (757) 446-1377

WVEC TV-13 (ABC)
613 Woodis Avenue
Norfolk, VA 23510
News Room (757) 628-6200
Fax: (757) 628-5855
Asst. News Director: Bruce Moore
Bmoore@wvec.com

Cox Communications
179 Louise Drive
Newport News, VA 23601
Phone: (757) 369-6337/6338
Fax: (757) 369-6350
Producer/Dir. Brian Saunders/Karen Benson

WAVY TV-10 (NBC)
300 Wavy Street
Portsmouth, VA 23704
Fax: (757) 397-8279
Wavy.desk@lintv.com
News Director:
Jim Turpin (757) 396-6165
Assignment Director:
Tiffany Wiggins (757) 396-6180

WHRO-15 (PBS)
5200 Hampton Blvd.
Norfolk, VA 23508
Phone: (757) 889-9400
Fax: (757) 489-0007
Info@whro.org

Channel 47
Hampton City Channel
Kathleen Bell
Phone: (757) 727-6398
Fax: (757) 628-3507

Print

Daily Press
7505 Warwick Boulevard
Newport News, VA 23607
Phone: (757) 247-4730
Fax: (757) 245-8618
Breaking News: Kelli Caploun
Env. Science Reporter: Jeff Long
Military Reporter: Rick Rogers

Poquoson Post, Yorktown Crier
By the Bay
4824 George Washington Memorial Hwy
POB 987 Yorktown, VA 23692
Phone: (757) 898-7225
Fax: (757) 890-0119
Managing Editor: Beth Meisner
Military Reporter: Kathy Hull

Virginia Pilot
150 W. Brambleton Avenue
Norfolk, VA 23510
Phone: (757) 446-2414
Fax: (757) 446-2414
Military Team Editor: Dwight Cunningham
Environmental Reporter: Scott Harper

Richmond Times Dispatch
Williamsburg News Bureau
P.O. Box 439
Williamsburg, VA 23187
Phone: (757) 229-1512
Fax: (757) 220-1771
Peninsula Reporter: Andy Petkovsky

The Flyer
Attn: Editor
Phone: (757) 764-2018
Fax: (757) 764-3475

Radio

Classic Hits 106.9 FM
Classic Rock
870 Greenbrier Circle, Ste 399
Chesapeake, VA 23320
Phone: (757) 366-9900
Wafx.com/home_2.shmtl
Fax: (757) 523-0005
Program Director: Mike

WGH Eagle 97 Country
Studio Line: (757) 490-9797
Fax: (757) 490-8973
News Director: Jennifer Lewis

WCKO 1110 AM
Christian
468 S. Independence Blvd.
Virginia Beach, VA
(757) 493-9919

WWDE 101.3 FM
Pop
5555 Greenwich Road
Virginia Beach, VA 23462
Phone: (757) 497-2000
Fax: (757) 473-1100

WVCL/WKCL FM
WTAR 850 AM
Talk/Sports
168 Business Park Drive
Virginia Beach, VA
www.sinclairstations.com/AM
Phone: (757) 671-1000
Program Director: David McDonald

WNOR 98.7 FM/AM
Classic Rock
870 Greenbrier Circle
Chesapeake, VA
Phone: (757) 366-9900
Fax: (757) 523-0005
Program Manager: bigbird@fm99.com

WHRO 90.3 FM
WHRV 89.5 FM
Public Radio
5200 Hampton Blvd
Norfolk, VA 23508
www.whro.org/info@whro.org
Phone: (757) 889-9400
Fax: (757) 489-0007

WNIS 790 AM
News/Talk
500 Old Dominion Tower
999 Waterside Drive
Norfolk, VA 23510
www.sinclairstations.com/AM/
Phone: (757) 640-8585

WODC 88.5 FM / 103.7 FM
Christian
3177 Virginia Beach Blvd, Ste B
Virginia Beach, VA 23452
Phone: (757) 498-9632
Fax: (757) 498-8609

Appendix D

Glossary of Terms

Glossary of Terms

Action Memorandum	A concise written record of the decisions involved in selecting a Removal Action.
Administrative Record	A file that is maintained and contains all information used by the lead agency to make its decision on the selection of a response action under CERCLA. This file is available for public review, and a copy is established at or near the site, usually at an Information Repository. Also, a duplicate file is stored in a central location, such as a regional or state agency office.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or "Superfund", provides funding and enforcement authority for hazardous waste site cleanups and hazardous waste spill cleanups. The release or threat of a release into the environment of any defined hazardous substance could result in CERCLA response or liability. Removal and remediation are the primary response actions.
Community Interviews	Informal face-to-face interviews held with selected local residents, government officials community groups, media representatives, potentially responsible parties, and other individuals interested in site activities.
Community Relations	The U.S. Environmental Protection Agency's program to inform and involve the public in the Superfund process and to respond to community concerns.
Community Relations Plan	A formal plan that identifies community concerns and preferences and provides a schedule for conducting community outreach activities at a Superfund site.
Contact Person	Designation of one staff member as a contact person who assumes responsibility for addressing citizens' concerns, answering their questions and responding to inquiries from the media.
Engineering Evaluation/Cost Analysis	An analysis of removal action alternatives for a site, similar to a remedial program Feasibility Study. The EE/CA must be available for a 30-day public comment period prior to the signing of the Action Memorandum.
Environmental Restoration Program	Formally called the IRP. A program instituted by the Department of Defense to identify, evaluate, and correct hazardous substance use, storage, and disposal sites located on Department of Defense property.
Expedited Response Action	A cleanup or removal action given priority during the remedial action process because of an immediate threat to human health or the environment.

Explanation of Differences	After adoption of a final remedial action plan, if any remedial or enforcement action is taken, or if any settlement or consent decree is entered into, and if any such action, settlement, or decree differs in any significant respects from the final plan, the lead agency is required to publish an explanation of the significant differences and the reasons the changes were made.
Fact Sheet	A brief report summarizing current or proposed activities of the cleanup program. The Fact Sheet presents technical and/or enforcement information in a clear and understandable format.
Formal Public Hearings	Formal hearings organized by the agency that are open to the public.
Information Repository	The Information Repository is a project file or repository that contains site information, documents on site activities, and general information about environmental activities. It is located in a public building that is convenient for local residents. EPA now requires an Information Repository at all Remedial Action sites and any Removal Action sites likely to extend beyond 45 days.
Installation Restoration Program	A program instituted by the Department of Defense to identify, evaluate, and correct hazardous substance use, storage, and disposal sites located on Department of Defense property.
Key Messages	Prepared phrases or ideas that are woven into statements made to the public that express the operating philosophy and goals of a group or organization.
Kickoff Meeting	A meeting held at the beginning of the environmental investigation that includes staff from overseeing agencies and the public, and which provides a description and schedule of the nature of the work that is going to be done.
Mitigate	To reduce or eliminate the potential for hazardous waste to adversely impact public health or the environment.
National Priorities List	EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response. The list is based primarily on the score a site receives using the Hazard Ranking System. EPA is required to update the NPL at least once per year.
News Media Coordination	Information sessions or briefings held for representatives of the media to discuss on-site actions.
Open House	An informal meeting in a public location where people can talk to agency officials one on one.

Operable Unit	An action taken as one part of an overall site cleanup. For example, a specific system could be installed to halt spreading groundwater contaminants while a more comprehensive and long-term Remedial Investigation/ Feasibility Study is underway. A number of OUs can be used in the course of a site cleanup.
Public Comment Period	A designated time period (usually coinciding with the release of the Remedial Investigation/Feasibility Study report or the revision of the Record of Decision) when comments from citizens about environmental activities are invited.
Public Meeting	A large meeting open to the public. Experts are available to present information and answer questions. Citizens may ask questions and offer comments.
Public Notices	Advertisements, usually in the form of a display ad, that are published in major local newspapers, broadcast via local radio stations, or sent in individual mailings to announce agency decisions, major project milestones, Public Meetings, or to solicit public comment on agency actions.
Record of Decision	A public document that explains which cleanup alternatives will be used at National Priorities List sites. The Record of Decision is based on information and technical analysis generated during the Remedial Investigation/Feasibility Study and consideration of public comments and community concerns. The ROD, and all documents used to prepare the ROD, are located in the Administrative Record.
Remedial Action Process	The seven steps in the Remedial Action Process, as required by CERCLA and the National Contingency Plan (NCP), are: 1. Preliminary Assessment (PA). A review of records, permits, and titles pertaining to activities at a site. This phase determines if further investigation is warranted and usually does not require a site visit. 2. Site Inspection (SI). Visit(s) to the site to evaluate potential hazards. Activities in this phase may include noting the locations of streams and rivers relative to the site, the proximity of people to the site, weather conditions, who owns and/or operates the site, and the current land usage. Sampling wastes, soil, groundwater, well water, river water, and air both on and off site are used to determine what hazardous substances are present and if they have migrated from the site. 3. Remedial Investigation (RI). A carefully designed field study involving extensive sampling and laboratory analyses. These analyses generate the data necessary to determine the type and extent of contamination, the soil type, the water drainage patterns, and the resulting human health and environmental hazards.

4. Feasibility Study (FS). An analysis of specific site cleanup needs and an evaluation of various cleanup alternatives based on relative effectiveness, cost, and public acceptance. The study establishes the criteria for cleaning up the site and facilitates the selection of a cleanup method. The selection of the recommended remedial action alternative is then documented in a Record of Decision.

5. Remedial Design (RD). Development of technical drawings and specifications for the selected Remedial Action. This phase generates the plan necessary to conduct the cleanup.

6. Remedial Action (RA). Actual long-term, final cleanup of the site or containment of contamination as planned in the Remedial Design. Although really only a phase in the entire process, the RA is the activity that the other activities build toward.

7. Operation and Maintenance. Follow-up activities to the Remedial Action. These activities, such as long-term monitoring, ensure that the cleanup and subsequent actions are functioning as planned.

Removal Action	An immediate action taken over the short-term to address a release or threatened release of hazardous substances.
Responsiveness Summary	A summary of the written or oral comments made by the public on key documents (such as the RI/FS and EE/CA reports) and agency responses to those comments. The responsiveness summary is required as a component of the Record of Decision (for the RI/FS process only).
Revision of the Community Relations Plan	Revision of all or parts of the Community Relations Plan for a site to incorporate new information, reflect changes in community concerns, or prepare for community activities during Remedial Design and Remedial Action.
Site Tours	Scheduled trips to the site for media representatives, local officials, and citizens during which technical and community relations staff is available to answer questions.
Task Force	A forum that brings together the various agencies that are responsible for overseeing the remediation of an environmental problem. Members of the Task Force establish the Public Meeting schedule and agenda.
Workshops	A series of seminars or meetings to discuss hazardous substance issues, to allow citizens to comment on proposed response actions and to provide information on the technical issues associated with the site. Experts may be invited to explain the problems associated with releases of hazardous substances and possible remedies to these problems.

Appendix E

Information Repository and Public Meeting Locations

Information Repository and Public Meeting Locations

Information Repository Location

Hampton Central Library
4207 Victoria Boulevard
Hampton, Virginia 23669
(757) 727-1312, Reference Deck
Repository Index Reference Number: 363.7ENP
Library Hours: Monday – Thursday 9 a.m. to 9 p.m. Friday and Saturday.... 9 a.m. to 5 p.m.
Sunday 1 p.m. to 5 p.m.

Meeting Locations

Meeting locations will be determined on a case-by-case basis. At all times, an effort will be made to hold the meetings at locations at times that are accessible and convenient for the widest range of audience members to attend.

Appendix F

Community Interview Responses

Langley Community Interview Responses

Total # of Participants:	22		
On Base:	5	Others:	17

1. How long have you lived in this community?			
On Base[1]:	# of Responses	Others[2]:	# of Responses
14 years	1	50 years or more	2
9 years	1	30-49 years	2
5 years	1	20-29 years	4
3 years	2	10-19 years	5
		8 years	1
		3 years	1
		2 years	1
		Less than 1 year	1
2a. What issues do you think have received the most attention locally?			
On Base:	# of Responses	Others:	# of Responses
Crime	2	Development	7
Flying operations	1	Education	3
Terrorism	1	Traffic	5
General officer population	1	Local elections	1
Local politics	1	Noise	2
Waste from out of state	1	Taxes	3
		Crime	2
		Racial issues	1
2b. How sensitive is the local area to environmental issues on a scale from 1 to 5? (1 being not sensitive, 5 being extremely sensitive)			
On Base:	# of Responses	Others:	# of Responses
5	0	5	3
4	0	4	5
3	1	3	8
2	4	2	1
1	0	1	0
2c. What do you think is the most important environmental problem facing the community today?			
On Base:	# of Responses	Others:	# of Responses
Water quality impact on fishing and crabbing	1	Water quality	9
Protection of natural resources	1	Air quality	2
Asbestos	1	Litter/dumping	3
Lead paint	1	Loss of green space	2
Noise	1	Over population	1
		Noise	2
		Constraints on development due to wetlands	1
3. Who you consider to be leaders in the community?			
On Base:	# of Responses	Others:	# of Responses
Command Staff	4	City Council	8
Not sure	1	City Staff	6
		Sierra Club	1
		Chesapeake Bay Foundation	1
		Not sure	1
		Citizens/volunteers	3
		The church	1
		State government	2
		Civic association	1
		Developers/builders/realtors	1

4. Have you or any of your relatives ever worked at Langley (Respondents off the base only)?			
On Base:	# of Responses	Others:	# of Responses
Yes	NA	Yes	4
No	NA	No	13
5a. How close do you live to Langley (Respondents off the base only)?			
On Base:	# of Responses	Others:	# of Responses
NA	NA	Greater than 10 miles	1
		10 miles	2
		8 miles	1
		5 miles	1
		3 miles	3
		2 mile	2
		1 mile	2
		Less than 1 mile	5
5b. What are your general thoughts about having Langley as a neighbor (Respondents off the base only)?			
On Base:	# of Responses	Others:	# of Responses
NA	NA	Positive	14*
		Neutral	2*
		Negative	1
		*9 people mentioned the jet noise as a thing to "deal" with. Several mentioned that flights during normal sleeping time as difficult.	
6. Do you or any of your family members participate in any outdoor recreational activities in or around Langley? If so, what type of activities and where?			
On Base:	# of Responses	Others:	# of Responses
Yes	3	Yes	10
Baseball	1	Bicycle	4
Fishing	1	Boating/water recreation	6
Golfing	2	Walks	2
Sailing	1	Air shows	1
Canoeing	1	Thrift store	1
No	2	No	7
7a. Do you feel that you have a good understanding of Langley's activities and its operations?			
On Base:	# of Responses	Others:	# of Responses
Yes	5	Yes	10
No	0	No	2
		Somewhat	5
7b. How or where have you received most of your information about Langley's environmental activities?			
On Base:	# of Responses	Others:	# of Responses
ERP/CEV staff	2	Fact sheet	3
word of mouth/email	1	Local media	3
Environmental Protection Committee	1	Local organizations	3
Local newspaper	1	Newsletters/work	1
		Friends	2
		Programs: Adopt-a-Spot, RAB mosquito spraying	3
		Don't hear things	2

8a. In your opinion, how does the public typically perceive the presence of federal and state regulatory agencies in the area?

On Base:	# of Responses	Others:	# of Responses
Good impression	1	Glad they are here/enjoy financial benefit	4
Not sure	3	Negatively	5
Public doesn't pay attention	1	Not sure	3
		Mixed feelings	3
		Not strong enough	2

8b. What organizations or individuals do you consider to be most credible when it comes to environmental issues?

On Base:	# of Responses	Others:	# of Responses
ERP staff	4	Sierra Club	2
EPA/Department of Interior	1	City of Hampton	2
		Chesapeake Bay Foundation	2
		EPA	7
		Not sure	5
		Dept. of Agriculture	2
		Volunteer organizations	2
		USCOE	1

9a. Prior to this conversation, were you aware that Langley is on EPA's Superfund list?

On Base:	# of Responses	Others:	# of Responses
Yes	4	Yes	10
No	1	No	7

9b. When did you first become aware of environmental concerns at Langley?

On Base:	# of Responses	Others:	# of Responses
8 years ago	1	More than 20 years ago	2
5 years ago	1	10-20 years ago	2
4 years ago	1	5 years ago	2
3 years ago	1	3 years ago	1
2 years ago	1	2 years ago	3
		Not sure	3
		Today	4

9c. How did you become aware?

On Base:	# of Responses	Others:	# of Responses
Work	3	Newsletter/fact sheet	3
Work near ERP site	1	Local media	4
Hazardous materials handling class	1	Work	3
		Family member involved in cleanup	1
		RAB	1
		This interview	4
		Tour de Trash	1

9d. What do you know about environmental issues at Langley?

On Base:	# of Responses	Others:	# of Responses
General contamination	2	Not much	7
Water/wetlands issues	2	Noise pollution	2
Conservation	1	Spills	3
Toxics disposal	1	Very familiar	1
Airplane issues	1	They (Langley) are taking care of problems	2
		What I read in the newspaper	2

10a. Do you think that residents in the community believe their health, or their children's health, may be affected by Langley?			
On Base:	# of Responses	Others:	# of Responses
Yes	2	Yes	3
No	3	No	10
		Not sure	4
		- Chemical fumes from planes can't be good	
		- Hearing/noise	
		- Losing sleep from noise	
10b. What do you believe?			
On Base:	# of Responses	Others:	# of Responses
Yes	0	Yes	2
No	5	No	9
		Not sure	5
11. Who would you turn to if you had health concerns?			
On Base:	# of Responses	Others:	# of Responses
Senior leadership on base	2	ERP	3
ERP	2	Doctor	5
Local congressman	1	Local congressman	3
		City Hall	5
		Not sure	2
		Base commander	1
		EPA	1
12a. Have you had any problems that you think are attributable to Langley?			
On Base:	# of Responses	Others:	# of Responses
Yes	0	Yes	0
No	5	No	17
12b. Do you have any current concerns about the site?			
On Base:	# of Responses	Others:	# of Responses
Yes	1*	Yes	4
No	4	No	13
*Why do we have to put gas tanks above ground? Also, concerned about people working around mold in basements.		- Noise/flight pattern is a problem - Why is it on Superfund list - Safety since 9/11/01	
13. Are Langley officials perceived as credible and responsive to public problems?			
On Base:	# of Responses	Others:	# of Responses
Yes	4	Yes	13
No	0	No	1
Depends on individual	1	Not sure	3
14a. In terms of involvement in the community, have you participated in any public hearings/meetings?			
On Base:	# of Responses	Others:	# of Responses
Yes	0	Yes	12
No	5	No	5
14b. If so, what were the issues?			
On Base:	# of Responses	Others:	# of Responses
No participation		Environmental cleanup	5
		Noise	2
		Education/schools	3
		Development	3
		Taxes/budget	3

14c. Do you participate in any civic organizations? If so, which one(s)

On Base:	# of Responses	Others:	# of Responses
Yes	0	Yes	13
No	5	No	4
		- Scouts	- Clean City Commission
		- Kiwanis	- Sandy Bottom Nature Park
		- Neighborhood Watch	- Hunt Club
		- Woman's Shelter	- Brain Injury Association
		- NAACP	- Church
		- Sierra Club	

15. What is your opinion of the government's commitment to cleaning up hazardous waste?

On Base:	# of Responses	Others:	# of Responses
Positive	2	Positive	16
Seems slow	2	Negative	1
No comment	1		
		- Mean well but not accomplishing enough	
		- Depends on who is in office	
		- Too slow, ineffective	
		- Good intentions	

16a. Have you participated in activities at Langley?

On Base:	# of Responses	Others:	# of Responses
Yes	5	Yes	10
No	0	No	7

16b. If so, which activities?

On Base:	# of Responses	Others:	# of Responses
Clean the Bay	3	Social events	2
Social events	3	Education events	2
Work related	1	Recreational events	6

17a. How would you like to be involved in future cleanup response activities?

On Base:	# of Responses	Others:	# of Responses
Do not want to be involved	1	Receive information	13
Fully informed already	1	Do not want to be involved	3
Receive information	3	Already involved	1

17b. How do you want to receive information about cleanup activities?

On Base:	# of Responses	Others:	# of Responses
Fact sheet	3	Fact sheet	8
Local media	1	Email	6
		Website	1
		News/media	2

17c. How frequently?

On Base:	# of Responses	Others:	# of Responses
Quarterly	2	Annually	2
Two times per year	1	Quarterly	9
		Monthly	3
		Semiannually	2
		As needed	1
		Not sure	1

17d. What information would you like?

On Base:	# of Responses	Others:	# of Responses
Summary of progress	3	Like current information	2
		General information/summary	5
		Progress only	2
		Volunteer opportunities	1
		Storm water issues	1
		Anything environmentally significant	1
		Not sure	6
		Air issues	1

18a. How can Langley best provide information concerning response activities to the community?

On Base:	# of Responses	Others:	# of Responses
Fact sheet	2	Fact sheet	5
Television, newspaper	1	Newspaper	3
No comment	2	Library	1
		Electronically	3
		Not sure	8

18b. What would be the best location for community meetings?

On Base:	# of Responses	Others:	# of Responses
Library	1	Hampton City Library	7
Local government building	1	Sandy Bottom Nature Park	2
Base theatre	2	City Hall	3
Hampton Coliseum	1	Not sure	3
		Community center	2
		Burbank Elementary School	1
		Air and Space Center	1
		On base	2

18c. What would be the best location for an information repository?

On Base:	# of Responses	Others:	# of Responses
Internet	4	Library	9
Library	1	Website	4
On base	1	City Hall	2
		Not sure	5

19a. Langley has convened a Restoration Advisory Board (RAB) to enhance understanding and dialogue with the community. Would you be interested in attending such meetings?

On Base:	# of Responses	Others:	# of Responses
Yes	1	Yes	9
No	2	No	5
Maybe	2	Not Sure	3

19b. Who would you like to see represented on the RAB?

On Base:	# of Responses	Others:	# of Responses
No comment	3	Community members	2
Wing commander	1	Neighborhood representatives	5
Environmental flight	1	Technical experts	1
Support group commander	1	Mayor	2
		Public Works Director	1
		5 private citizens were identified	

20a. What are your primary sources of information about the community?

On Base:	# of Responses	Others:	# of Responses
The Flyer	2	Newspaper	2
Newsletter	2	Word of mouth	2
No comment	1	Newsletters	4
		Planning Commission	1
		City of Hampton website	1
		No comment	9

20b. What newspapers do you read?			
On Base:	# of Responses	Others:	# of Responses
Daily Press	3	Daily Press	15
None	1	Virginia Pilot	2
No comment	1	Smithfield Times	1
		The Flyer	1
		Poquoson Post	1
20c. Which TV stations do you watch?			
On Base:	# of Responses	Others:	# of Responses
WAVY 10	2	WTKR (3 CBS)	5
All three	2	WAVY (10 NBC)	7
Nothing	1	WVEC (13 ABC)	7
		Don't watch	6
		CNN	1
		Newport News local channels	1
20d. Which radio stations do you listen to for community news?			
On Base:	# of Responses	Others:	# of Responses
WVEC 95.7	1	WHRO	1
Eagle 97.3	1	WHRV	1
NPR	1	WTAR	1
101.32	1	Don't listen for news	10
No comment	1	Various	3
		NPR	2
21a. Do you feel that the media in this area does an adequate job of covering environmental issues?			
On Base:	# of Responses	Others:	# of Responses
Yes	3	Yes	7
No	1	No	4
Not Sure	1	Somewhat	6
21b. Do you feel the media has accurately represented your concerns?			
On Base:	# of Responses	Others:	# of Responses
Yes	4	Yes	9
No	1	No	7
		Somewhat	1
22. Can you suggest other individual or groups that should be contacted for additional information?			
On Base:	# of Responses	Others:	# of Responses
Base golf course manager		Friends of Sandy Bottom Park Newport News City Council Clean City Commission	

Appendix G

Technical Assistance Grants

TECHNICAL ASSISTANCE GRANTS

Recognizing the importance of community involvement and the need for citizens living near NPL sites to be well informed, Congress included provisions in the Superfund Reauthorization Act of 1986 to establish the Technical Assistance Grant (TAG) program, intended to promote involvement in decisions on site-specific cleanup strategies under Superfund.

A TAG provides money for activities that help a community participate in decision making at eligible Superfund sites. An initial grant up to $50,000 is available for any Superfund site that is on the EPA's NPL or proposed for listing on the NPL and a response action has begun.

A community is eligible for a grant if: (1) it is near one of the sites on the NPL; (2) members of the community may be affected by a release or threatened release at any facility listed on the NPL, or proposed for listing on the NPL; (3) the response action at the site is underway; and (4) the group demonstrates it has or will have reliable procedures for record keeping and financial accountability relating to managing the TAG.

A group is not eligible if (1)it is a potentially responsible party (PRP) or receives money or services from a PRP or represents a PRP; (2) it is not incorporated for the specific purpose of representing affected people; (3) it is an academic institution; and (4) it is a political subdivision (example: township or municipality).

Only one TAG may be awarded for any site. However, when the grant recipient changes (for example, EPA terminates the original TAG for non-performance, fraud or conflict of interest or the recipient terminates the original TAG), the process for applying for a TAG starts over with interested applicants writing a Letter of Intent to the Agency expressing interest in a TAG.

The bulk of the TAG funds should be used to hire an independent technical advisor (TA) to help the group interpret and comment on site-related decisions. Examples of how a technical advisor can help a group include (1) reviewing preliminary site assessment/site inspection data; (2) participating in public meetings to help clarify information about site conditions; and (3) visiting the site periodically during cleanup to observe progress and provide technical updates to the group.

The group can also use a TAG to hire a grant administrator to help manage and administer the grant. TAG funds can also be used to purchase or rent office supplies and to print newsletters or fact sheets to disseminate information about the site. The goal of these and other eligible TAG activities is to help improve the community's understanding of environmental conditions and cleanup activities at Superfund sites.

TAG funds cannot be used for: (1) lawsuits or other legal actions such as paying for attorney fees for advice tied to any kind of legal action; (2) political activity and lobbying; (3) activities such as amusement, social activities, ceremonials and costs associated with these activities such as meals, lodging, rentals, transportation and tips; (4) group members' tuition and travel; (5) generation of new primary data such as well drilling and testing, and sampling; (5) reopening final EPA decisions such as the Record of Decision; (6) resolving disputes with EPA; (7) epidemiological or health studies, such as urine or blood testing.

The first step for getting a TAG is to let EPA know of the group's interest in getting a TAG. The group should first submit a Letter of Intent (LOI) to the EPA Regional Office within the area. The Letter of Intent should clearly state that the group intends to apply for a TAG, and should identify the name of the group, the Superfund site for which the group would like to apply and the name of a contact person in the group and his/her phone number.

EPA will post a public notice notifying other interested parties that a TAG for the site may soon be awarded. An ad in a local newspaper announcing that EPA has received a LOI is usually how the Agency makes public notice of grant availability. Other interested groups will have 30 days to contact the group that sent the LOI to form a coalition. If the groups cannot form a coalition, EPA will accept separate grant applications from all interested groups for an additional 30 day period.

The next step is to determine whether the state requires review of the grant application so that it's Governor can stay informed about the kinds of grants awarded within the state. The EPA Regional Office can provide the group with the contact for the state's intergovernmental review process.

The last step is to prepare the TAG application (Application for Federal Assistance) which includes: (1) a budget, which must clearly show how the money will be spent; and (2) a scope of work, which must clearly explain how the group will organize, will share information with affected community, will explain project milestones and a schedule for meeting those milestones, and how the interested parties will interact with each other.

The EPA published a final rule for the TAG Program under the CERCLA. The EPA developed the final rule to further streamline the TAG program by simplifying application and management procedures, and allowing advance payments up to $5,000 to new recipients. The intent of the rule is to make grants for technical assistance more readily available to local community groups and to promote effective public participation in the Superfund cleanup process. The final rule became effective October 2, 2000.

The EPA Contact is: Lois Gartner, Office of Emergency and Remedial Response, 5204-G, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460 (703) 603-8889.

Appendix H

EPA's Federal Facility Hazardous Waste Compliance Program

EPA'S FEDERAL FACILITY HAZARDOUS WASTE COMPLIANCE PROGRAM

1.0 INTRODUCTION

At the U.S. Environmental Protection Agency (EPA), the Office of Waste Programs Enforcement (OWPE), within the Office of Solid Waste and Emergency Response, is responsible for ensuring compliance by Federal facilities with Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements as amended by the Superfund Amendments and Reauthorization Act (SARA). In 1987, OWPE established a Federal Facility Task Force to focus dedicated resources on achievement of Federal facility compliance. The Task Force now has a permanent role within OWPE and has been renamed the Federal Facilities Hazardous Waste Compliance Office (FFHWCO).

The primary goals of FFHWCO are to assist EPA regions to reach and implement CERCLA cleanup agreements at National Priorities List (NPL) sites and to ensure compliance with RCRA in a nationally consistent manner. FFHWCO develops guidance and policy for Federal facility compliance, assists in resolving issues that arise in negotiations with Federal facilities, tracks ongoing negotiations, and supports enforcement actions.

Over 1,200 Federal facilities have been identified that require investigation and possible remediation under CERCLA. These facilities range in size from hundreds of acres to tens of thousands of acres, and many contain multiple contaminated areas.

Federal facilities that require investigation are those that manage hazardous waste or may have potential hazardous waste problems. The Departments of Defense (DoD), Interior (DOI), and Energy (DOE) account for about 84% of the Federal sites that require investigation.

Hazardous waste contamination at Federal facilities may result from such activities as manufacturing, testing, loading, and packaging weapons; maintaining and repairing aircraft and vehicles; plating metal; and producing, processing, and recovering nuclear materials. Types of hazardous waste disposed of include explosives, solvents and cleaning agents, paints, heavy metals, pesticides, waste oil, and various organics. At DOE facilities, disposal of high- and low-level radioactive and mixed hazardous and radioactive waste is a common problem. Past disposal practices at Federal facilities include disposal in unlined pits, drainage ditches, holding ponds, drying beds, and landfills; discharge on the ground; and burning.

The number of Federal facilities to be investigated, their size, and the types and sources of contamination combine to create the challenge of ensuring compliance by Federal facilities with hazardous waste laws. This challenge is heightened by the potential at each site for overlapping jurisdiction among Federal programs and between states that are authorized for the RCRA base program or HSWA program (that is, the 1984 RCRA amendments, called the Hazardous and Solid Waste Amendments) and the Federal CERCLA programs. There is also a potential overlap with other Federal laws, such as the Atomic Energy Act, and with other state and local hazardous waste-related authorities.

2.0 STATUTORY OVERVIEW

Federal facilities must comply with the requirements of RCRA and CERCLA. This section presents an overview of those requirements.

2.1 RCRA

Section 6001 of RCRA expressly subjects Federal facilities to RCRA provisions and implementing regulations, including requirements for permits, corrective action, and reporting. Federal treatment, storage, and disposal facilities that handle hazardous waste must have RCRA permits and must address hazardous waste releases.

Approximately 336 Federal facilities treat, store, or dispose of hazardous waste. Eighty are land disposal facilities and 256 are treatment and storage facilities. This number represents less than 7% of the universe of RCRA treatment, storage, and disposal facilities.

EPA or an authorized state conducts an annual inspection at all RCRA regulated Federal facilities, as required by Section 3007(c). Compliance mechanisms are discussed in the section following this statutory overview.

2.2 CERCLA

CERCLA devotes a special section to Federal facilities, Section 120, enacted in the 1986 *Superfund amendments*. Section 120(a) states that Federal departments, agencies, and instrumentalities are subject to CERCLA just like nongovernment entities, including CERCLA's liability provisions.

Pertinent guidelines, rules, regulations, and criteria apply in the same manner and to the same extent, with the exception of requirements pertaining to bonding, insurance, and financial responsibility.

Section 120 establishes special requirements and timetables regarding Federal facilities. For example, Section 120(c) requires establishment by EPA of a Federal Agency Hazardous Waste Compliance Docket (docket) that lists Federal facilities that manage hazardous waste or may have potential hazardous waste problems. Based on information submitted under RCRA and CERCLA, the docket identifies the universe of Federal facilities to be evaluated for possible contamination.

2.2.1 Federal Agency Hazardous Waste Compliance Docket

The docket is updated biannually and includes the following:

- Information on releases of reportable quantities of hazardous substances under section 103 of CERCLA;
- Information submitted to obtain a permit under Section 3005 of RCRA;
- Information submitted under Section 3010 of RCRA from generators, transporters, owners, and operators involved with waste designated as hazardous under RCRA; and
- Information submitted for the inventory of Federal agency hazardous waste facilities that is compiled every two years under Section 3016 of RCRA.

The docket is available for public inspection at EPA regional offices. Each regional docket contains the documents submitted under the reporting provisions described above, and any relevant correspondence, for each facility in that region. A complete national index is maintained at EPA Headquarters. The docket was first published on February 12, 1988, at 53 Federal Register 4280, with 1,095 facilities. The first update was published on November 16, 1988, at 53 Federal Register 46364, with 1,170 facilities. The second update is scheduled to be published in November, 1989 with1,269 facilities. [The 14th update was published on October 2, 2001, at 66 Federal Register 50185, with 2,214 facilities listed.]

Once a Federal facility is listed on the docket, a preliminary assessment (PA) and, if necessary, a site inspection (SI), must be conducted within 18 months under Section 120(d). The statute requires EPA to ensure that PAs are conducted, while the authority to conduct PAs is delegated to Federal agencies by Executive Order 12580. As of August 1988, 987 of the 1,095 facilities listed on the original

docket submitted PA information to EPA. EPA is currently reviewing this information for completeness and to determine whether further action is required.

2.2.2 National Priorities List (NPL)

Following the PA and SI, EPA applies the Hazard Ranking System (HRS) and includes sites that score 28.50 or above on the NPL. Inclusion on the NPL does not mean Superfund monies are available for cleanup as is the case with nonfederal sites; Section 111 (e)(3) specifies that the Fund is not available for remedial actions at Federal facilities (except for providing alternative water supplies where groundwater contamination is outside the Federal facility boundaries and the Federal facility is not the only potentially responsible party involved). Still, NPL listing of Federal facilities serves the purpose of alerting the public and providing information concerning risks to public health or the environment from the site. In addition, NPL listing assists Federal agencies to set cleanup priorities. There are currently 115 Federal facilities proposed or final on the NPL. [As of February 26, 2002 there are 166 Federal facilities proposed or final on the NPL.]

If a Federal facility is included on the NPL, Section 120(e) mandates that it begin a remedial investigation/feasibility study (RI/FS), in consultation with EPA and the state within 6 months of listing. EPA and the state must publish an enforceable timetable and deadlines for RI/FS completion, and EPA must review the RI/FS when completed.

2.2.3 Interagency Agreements

Section 120(e) also requires the Federal facility to enter into an interagency agreement (IAG) with EPA for the remedial action within 180 days of EPA's review of the RI/FS. An IAG is the vehicle for remedy selection. At a minimum, the IAG must include a review of cleanup alternatives considered and the remedy selected, a schedule for cleanup accomplishment, and arrangements for operation and maintenance.

EPA policy, reflected in the model IAGs developed with DoD and DOE, is to enter into an IAG at the RI/FS stage. This meets the requirements for starting an RI/FS and publishing a timetable and deadlines and provides for early input by EPA and the state into the RI/FS and remedy selection process. EPA policy is to have three-party IAGs, with the state joining EPA and the Federal facility as an active partner and signatory. IAGs are enforceable by the parties to the agreement and by citizens and states using CERCLA Section 310 authority.

Section 120(e) requires cleanup to begin at a Federal facility no later than 15 months after RI/FS completion. The RI/FS is complete when the record of decision (ROD) is signed. In their annual budget submissions, Federal agencies must include a review of alternative funding that might be used to provide for cleanup costs. The annual budget submission also has to include a statement on the hazards posed to public health and welfare, and the environment, as well as the consequences of failure to begin and complete remedial action. In addition, each Federal agency participating in the CERCLA program must submit an annual report to Congress. This report must describe the Federal agency's progress in such areas as reaching IAGs and conducting RI/FSs and cleanups.

2.2.3.1 Model IAG Provisions

To facilitate the negotiation of site-specific IAGs, EPA developed model IAGs with DoD and DOE in 1988. The models cover the following areas:

- Jurisdiction;
- Purpose;
- Scope;
- Statutory compliance/RCRA-CERCLA integration;
- Consultation with EPA;
- Dispute resolution;
- Enforceability;
- Stipulated penalties;
- Extensions;
- Force majeure [act of God]; and
- Funding.

The models are identified as CERCLA Section 120 agreements and are designed to apply at NPL sites where CERCLA is the lead response authority. Compliance with substantive RCRA requirements as applicable, relevant, or appropriate requirements (ARARs) is ensured through Section 121 of CERCLA and the model's statutory compliance section. For installations that include both NPL sites and RCRA units, language in the jurisdiction section that cites RCRA authorities may be used. Although these model agreements do not reflect state involvement (because it was impossible to have 50 state representatives at the negotiating table), EPA subsequently facilitated negotiations between DoD and various state organizations. These negotiations resulted in suggested model language for use in three-party Section 120 agreements.

Scope

The scope of agreement section of the model IAGs identifies (1) the units which are to be addressed by the agreement and (2) the units which will be excluded from the agreement that will be addressed by another authority, if any. At some installations, it is appropriate to cover all of the hazardous waste releases under one agreement while at others it may not be appropriate. Where all releases are covered, there are two options. First, the parties may agree to have all units, including non-NPL and RCRA units, covered by the Section 120 decision-making process set forth in the agreement. The second option is to include a separate decision-making process in an agreement for the non-NPL and RCRA units. Because the terms of the scope vary widely from site to site, no model language is provided.

Consultation

The consultation section of the model IAGs establishes the procedures for EPA and state review of documents. Documents designated as primary, including discrete portions of RI/FS and remedial design and remedial action (RD/RA) activities, are subject to dispute resolution procedures. Documents designated as secondary are subject to review and comment. Secondary documents are feeders to primary documents and are subject to dispute resolution when incorporated into primary documents or when the corresponding primary document is issued.

Dispute Resolution

The dispute resolution section allows the parties to the agreement to formally dispute issues associated with primary documents. This process ensures that the work being conducted by the Federal facility complies with the requirements of CERCLA, the NCP, and applicable state law. The EPA Administrator makes the final decision in disputes should the parties not resolve these disputes at lower levels. EPA expects that in most situations, disputes will be resolved at the project manager or director level.

The dispute resolution section also includes a threshold for stopping work affected by a dispute. The threshold is crossed in the event of inadequate or defective work that EPA or the state believes is likely to yield an adverse effect on human health or the environment, or to have a substantial adverse effect on the remedy selection or implementation process.

Enforceability

The enforceability section preserves citizen litigation rights under Section 310 of CERCLA. States are designated as "persons" under CERCLA and therefore can sue in Federal district court to enforce the IAG. The enforceability section specifically establishes that deadlines related to the RI/FS and terms and conditions related to RD/RA are enforceable, as is final dispute resolution, by any person pursuant to Section 310. In addition, all parties have the right to enforce IAG terms.

Stipulated Penalties

The stipulated penalties section allows EPA to assess stipulated penalties in the event of specified failures under the agreement. The amount assessed must be reported by DoD or DOE in its annual progress report to Congress.

Funding

The funding section requires DoD or DOE to seek sufficient funds for response and to include estimates in its annual report to Congress. EPA reserves its rights against any other party if funding is not available.

2.3 Federal Agency Authority Under CERCLA

Executive Order 12580, which delegates authorities contained in the Superfund Amendments and Reauthorization Act of 1986 (SARA), delegates Section 104 response authority to DoD and DOE for releases on their facilities or originating from their facilities. It requires that such response authority be exercised in accordance with Section 120, which allows the EPA Administrator to make the final decision on remedy selection should EPA and a Federal agency disagree. Section 120 also delegates the authority for all agencies to conduct response actions at their non-NPL facilities. For Federal facilities on the NPL, Section 120(e)(l) directs the agency that owns or operates the facility to perform an RI/FS; thereafter, that any must enter an IAG with EPA "for the expeditious completion by such...agency...of all necessary remedial action at such facility." All Federal agencies are delegated to Section 104 response authority for nonemergencies at non-NPL sites where the release is on their facilities or originating from their facilities.

Executive Order 12580 may have singled out DoD and DOE for additional response authority because both agencies established cleanup programs prior to the passage of SARA in 1986. DoD established its Installation Restoration Program (IRP) in 1975. Under the IRP, each service operates a program to identify and evaluate past waste disposal practices at DoD facilities. Studies and remediation are conducted as necessary. Section 211 of CERCLA governs management of the program. DoD funding for IRP in Fiscal Year 1989 is $500 million.

DOE initiated an informal program in 1984 to identify, evaluate, and remediate hazardous waste contamination at DOE facilities. DOE is developing a formal response program. DOE's five-year plan provides the basic framework for this program.

3.0 ISSUES UNIQUE TO THE EXECUTIVE BRANCH

This section describes two issues that are unique to the executive branch. These issues are funding and dispute resolution.

3.1 Funding

Unlike the private sector, Federal agencies cannot use earnings to fund their hazardous waste cleanup responsibilities. Federal funding, including funding for cleanups by Federal facilities, is requested by the President and appropriated and overseen by Congress. Thus, Congress plays an essential role in Federal facility cleanups by appropriating sufficient funds and compliance by Federal facilities with RCRA and CERCLA is subject to available appropriations.

3.2 Dispute Resolution

Federal agencies are created and supported by Congress and report to the President, who is ultimately accountable for agency missions. Federal agencies are immune from litigation except to the extent that sovereign immunity is specifically waived in legislation by Congress.

The Department of Justice (DOJ) says executive branch agencies may not sue each other; nor may one issue an administrative order to another without providing a prior opportunity to contest the order within the executive branch.[1] As in lawsuits, unilateral order authority is viewed as inconsistent with the constitutional principles of unity and unitary responsibility within the executive branch.[2] Executive branch disputes of a legal nature are properly resolved by the President or his or her delegate,

in DOJ's opinion, because lawsuits and unilateral administrative orders interfere with the President's ability to manage the executive branch.[3]

3.2.1 RCRA

DOJ has distinguished between Section 3008(a) compliance orders and Section 3008(h) corrective action orders with respect to EPA's authority to issue RCRA orders to Federal facilities. According to the DOJ analysis, EPA may issue Section 3008(h) corrective action orders but may not issue Section 3008(a) compliance orders.

3.2.1.1 Section 3008(a) Orders

According to DOJ, EPA may not issue a Section 3008(a) order to a Federal facility to address compliance violations because an order is not a "requirement" under Section 6001.[4] Section 6001 defines the obligation of Federal facilities to comply with RCRA. Section 6001 states in part that Federal agencies dealing with solid waste

> ...shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief)...in the same manner, and to the same extent, as any person is subject to such requirements...

DOJ found that the issue turned on whether a Section 3008(a) order constitutes a substantive or procedural requirement and cited RCRA's legislative history and case law to determine that Section 3008(a) orders are not requirements; they are ways to enforce requirements.[5]

Therefore, when addressing RCRA compliance violations at Federal facilities, EPA will first issue a Notice of Noncompliance (NON).[6] A NON is similar to a Section 3008(a) administrative complaint in content and format; it details the violation, remedy, and remedy implementation schedule.

After issuance of the NON, EPA and the Federal facility negotiate a Federal Facility Compliance Agreement (FFCA).[7] The FFCA resolves compliance violations outlined in the NON by specifying the agreed-on remedy, compliance schedule, and reporting and recordkeeping requirements. A FFCA also includes dispute resolution language, which emphasizes resolution at lower levels, and an

enforceability clause, which clarifies that the FFCA may be enforced under RCRA's Section 7002 citizen suit provision.

To ensure that negotiation of FFCAs is concluded in a timely manner, EPA has established an elevation process for resolution of issues.[8] EPA's goal is to conclude FFCA negotiations within 120 days. At day 90, EPA regions evaluate the negotiations and determine whether agreement is likely within 30 days. In a case where agreement does not appear likely in that timeframe, the case is referred to EPA Headquarters for resolution. Upon referral, the Assistant Administrator for the Office of Solid Waste and Emergency Response meets with an equivalent representative from the Federal agency involved. If the dispute is not resolved within 30 days, it is elevated for resolution to the EPA Administrator and his or her Federal agency counterpart.

DOJ's opinion that EPA may not issue Section 3008(a) orders to Federal facilities does not prohibit EPA from issuing such orders to the contractor at a government-owned contractor-operated (GOCO) facility.[9] Contractors at GOCO facilities are subject to RCRA to the same extent as any non-Federal entity, including orders assessing penalties. Several courts have held that penalties may not be assessed against Federal facilities because, under Section 6001, enforcement sanctions are distinct from requirements.[10] Although some Federal agencies indemnify their contractors, so that a fine assessed for environmental violations against the contractor is ultimately paid by the Federal agency, there is authority for the proposition that private contractors may not be afforded the privileges of the Federal government.[11]

3.2.1.2 Section 3008(h) Orders

Section 3008(h) corrective action orders, as opposed to Section 3008(a) compliance orders, are viewed by DOJ as integral to the permitting process, which Federal facilities are required to comply with under Section 6001.[12] Thus, EPA may issue Section 3008(h) corrective action orders to Federal facilities. Federal facilities that receive Section 3008(h) orders may confer with EPA on such orders and bring any issue that cannot be resolved at the regional level to the EPA Administrator for final resolution.[13] EPA may also issue Section 3008(h) orders to the contractor at GOCO facilities.

3.2.2 CERCLA

The application of CERCLA authorities at Federal facilities is less subject to interpretation than the application of RCRA authorities. Section 120 requires Federal facilities to enter into IAGs for remedial action at NPL sites. IAGs are enforceable through CERCLA's Section 310 citizen suit provision.[14] In addition, Section 122(1) specifically authorizes imposition of civil penalties for failure or refusal to comply with a Section 120 IAG.

EPA may issue an order under Section 104(e)(5)(A) to obtain access to a Federal facility or to collect information. EPA may also issue a Section 106 order to ensure compliance at a Federal facility where there is an imminent or substantial endangerment to public health, welfare, or the environment due to an actual or threatened hazardous substance release from the facility. In either case, however, Executive Order 12580 requires EPA to receive DOJ concurrence on the order. EPA may use its administrative and judicial authorities under CERCLA against a contractor at a GOCO facility.

4.0 RCRA/CERCLA INTEGRATION ISSUES

Frequently RCRA applies at a Federal facility that is also subject to CERCLA. For example, a Federal facility that is listed or proposed on the NPL may also have interim status or a permitted unit under RCRA.

4.1 Statutory Overlap

There are some unresolved issues regarding which statute should be used as the primary vehicle to ensure cleanup when both RCRA and CERCLA apply and how the statutes may be used together. This is particularly so where a RCRA-regulated release is the cause of NPL listing, rather than a contributing factor. Neither statute is entirely clear on these issues.

Most states are authorized to run the RCRA base program, and several are close to gaining authorization for HSWA authorities. Federal facilities have their own delegated authorities under CERCLA and Executive Order 12580. EPA, states, and Federal facilities share the ultimate goal of cleaning up Federal facilities, although there may be disagreement about the statute that should control in a particular case.

The statutory overlap may be broader than RCRA and CERCLA. Another federal statute, such as the Atomic Energy Act may apply in a given case. In addition, state or local hazardous-waste-related authorities, independent of RCRA or CERCLA, may apply to a particular facility.

4.2 Jurisdictional Overlap

Inherent in the statutory overlap is a jurisdictional overlap. The jurisdictional overlap may be between federal programs, such as RCRA and CERCLA, or between state and Federal programs, such as an authorized state RCRA base program and the federal CERCLA or HSWA programs.

Such overlaps have the potential for slowing cleanup while disagreements about which statute to use are resolved and for causing inconsistent or duplicative cleanup activities if disagreements are not resolved. To speed cleanup and avoid inconsistency or duplication, EPA has developed a mechanism to create a comprehensive, coordinated response at Federal facilities with a RCRA-CERCLA overlap. This mechanism is a three-party IAG with the state, EPA, and the Federal facility as signatories.

4.3 Three-Party Interagency Agreements

A three-party IAG can address site-specific state concerns and maximize state involvement in the cleanup process. Regulatory or oversight authority for work conducted under an IAG can be allocated in a manner consistent with the concerns of the parties. Such an agreement could satisfy a Federal facility's corrective action responsibilities under RCRA as well as the public participation requirements of both RCRA and CERCLA; a RCRA permit could later incorporate the IAG if appropriate.

A three-party IAG may be developed for either NPL or proposed NPL Federal facilities. A three-party IAG is also flexible enough to include a nonlisted RCRA regulated portion of a Federal facility where that makes sense from a technical standpoint, thus providing for a swifter comprehensive cleanup. An IAG allows the parties to include in a response action release of CERCLA hazardous substances that are not regulated under RCRA (e.g., radionuclides).

5.0 CONCLUSION

The Federal facility hazardous waste compliance program is on track. The provisions of CERCLA Section 120 are being implemented. With DoD and DOE agreement on model IAG language,

the number of finalized site-specific IAGs is rising. EPA is also using its RCRA authorities in Federal Facility Compliance Agreements to address compliance violations and corrective action at Federal facilities. Unique dispute resolution and enforcement procedures have been designed where deemed necessary by DOJ to ensure Federal facility compliance. To further enhance progress, EPA is developing three-party IAGs as a mechanism to integrate RCRA and CERCLA at Federal facility sites.

REFERENCES

1. Habricht, F. Henry II, Assistant Attorney General, Lands and Natural Resources Division, Department of Justice, April 28, 1987, statement before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, p.29.

2. Ibid.

3. Ibid.

4. Habricht, Appendix B.

5. Ibid.

6. Porter, J. Winston, Assistant Administrator for Solid Waste and Emergency memorandum to EPA Regional Administrators, RCRA and CERCLA at Federal Facilities, p.2. Response, January 25, 1988, Enforcement Actions Under

7. Porter, p.3.

8. Porter, J. Winston, Assistant Administrator for Solid Waste and Emergency Response, March 24, 1988, memorandum to EPA Regional Administrators, Elevation Process for Achieving Federal Facility Compliance Under RCRA.

9. Porter, p.4.

10. Habricht, Appendix B, p.6-9.

11. Inside EPA, December 18, 1987, In Boon to Enforcement, Judge Bars DOE from Intervening for Contractor, p.5.

12. Porter, p.5.

13. Ibid.

14. Conference Report on Superfund Amendments and Reauthorization Act of 1986, 99th Congress, 2d Session, Report 99-962, p.242.

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