Proposed Plan

Operable Unit 8 – Acid Neutralization Pits Area Groundwater
Defense Supply Center Richmond
Richmond, Virginia

May 2006

DEFENSE LOGISTICS AGENCY ANNOUNCES
OU 8 PROPOSED PLAN

1.0 INTRODUCTION

This Proposed Plan identifies the preferred alternative for protecting human health and the environment from impacted groundwater beneath and downgradient of the acid neutralization pits (ANPs) at Defense Supply Center Richmond (DSCR), Richmond, Virginia, and it provides the rationale for this preference. This Proposed Plan also includes summaries of other cleanup alternatives evaluated. Groundwater in the area of the ANPs has been designated as Operable Unit (OU) 8.

This Proposed Plan is issued by the Defense Logistics Agency (DLA), the lead federal agency for remedial actions at DSCR, in agreement with the United States Environmental Protection Agency (USEPA) Region 3, the lead regulatory agency, as well as the Commonwealth of Virginia, Department of Environmental Quality (VDEQ), the support regulatory agency.

DLA is issuing this Proposed Plan for public comment and participation in accordance with Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, and Sections 300.430(f)(2) and (f)(3) of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300). This Proposed Plan summarizes information

DATES TO REMEMBER

PUBLIC COMMENT PERIOD:
June 2 – July 17, 2006
DLA invites you to participate during the public comment period by submitting comments on the OU 8 Proposed Plan.

PUBLIC MEETING:
June 27, 2006 - 7:30 p.m.
DLA will hold a public meeting to explain the Proposed Plan and the alternatives evaluated in the Focused Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held at the:

Bensley Park and Community Center
2900 Drewrys Bluff Rd
Richmond, Virginia 23237

For more information, see the Administrative Record at the following location:

Chesterfield Public Library
Central Branch – Local History Dept.
9501 Lori Road
Chesterfield, Virginia 23832
Phone: (804) 748-1603

Monday - Thursday
Hours: 10:00 a.m. – 9:00 p.m.
Friday, Saturday
Hours: 10:00 a.m. – 5:30 p.m.
Closed Sunday

or online at http://www.adminrec.com/DLA.asp

Send written comments postmarked no later than July 17, 2006 to any of the following:

Defense Supply Center Richmond
Public Affairs Officer (DSCR-DSA)
Ms. Kim Turner
8000 Jefferson Davis Highway
Richmond, Virginia 23297-5000
(804) 279-3952
email:Kim.Turner@dla.mil
Fax (804) 279-6084

Virginia Department of
Environmental Quality
Office of Remediation Programs
Mr. James Cutler
629 East Main Street, 4th Floor
Richmond, Virginia 23219
email: jlcutler@deq.virginia.gov
(804) 698-4498

U.S. Environmental Protection Agency
Community Involvement Section
Ms. Trish Taylor
1650 Arch Street
Philadelphia, Pennsylvania 19103
email: taylor.trish@epa.gov
(215) 815-5539

Note: Selected environmental terms are defined in the glossary at the end of this document.

from the OU 8 Remedial Investigation (RI) and Focused Feasibility Study (FFS) reports as well as other documents. DLA, USEPA, and VDEQ encourage the public to review these documents to gain a more complete understanding of the DSCR installation and the CERCLA activities that have been conducted for this OU.

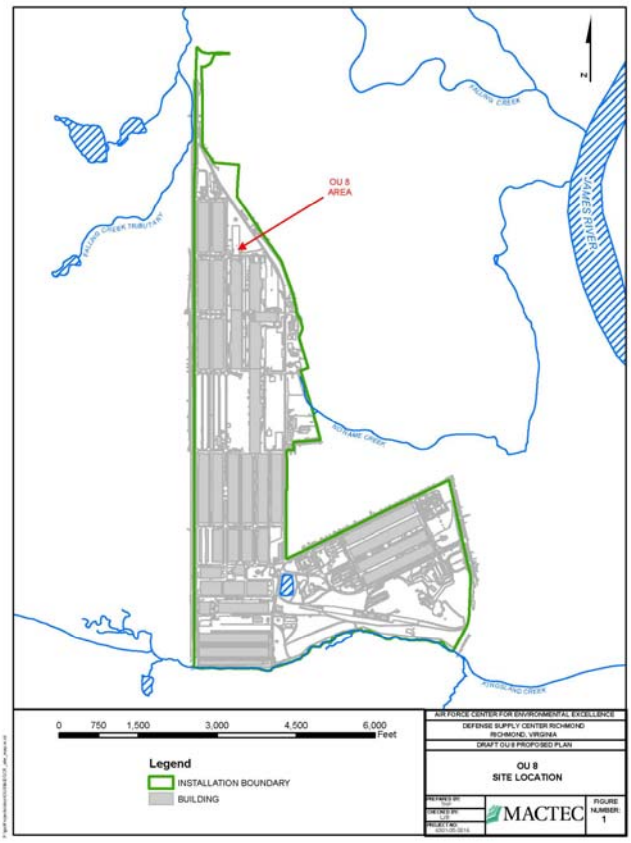
This Proposed Plan has been prepared to summarize DLA's and USEPA's preferred remedial action alternative at DSCR OU 8. The Proposed Plan is organized into the following sections:

1.0 Introduction
2.0 Site Background
3.0 Site Characteristics
4.0 Risk Summary
5.0 Remedial Action Objectives
6.0 Response Action
7.0 Summary of Remedial Action Alternatives
8.0 Evaluation of Alternatives
9.0 Summary of the Preferred Alternative
10.0 Community Participation

2.0 SITE BACKGROUND

DSCR is a federal installation (Figure 1) of approximately 650 acres located in Chesterfield County, Virginia, about 8 miles south of the City of Richmond. The property is owned by the U.S. Department of the Army and is occupied and operated by DLA. DSCR was built in 1941 as two separate facilities: the Richmond General Depot and the Richmond Holding and Reconsignment Point. With the creation of the Military General Supply Agency in 1962, the facilities were merged to become the Defense General Supply Center. DSCR, DLA's aviation, supply, and demand-chain manager, received its current name in 1996.

DSCR is a major industry in Chesterfield County. Land use in areas surrounding DSCR is primarily residential but also includes retail stores and light industry. The areas to the northeast, east, and south of DSCR have been developed as both single-family and multi-family housing. Water is supplied to residences and businesses by the City of Richmond water supply system; however, some homes in the DSCR vicinity still have private wells (*Final Updated Residential Well Survey*, Law 2002), which are used primarily for landscape irrigation.



DSCR was nominated for the CERCLA National Priorities List (NPL) in 1984 and was formally added to the NPL in 1987. This action occurred as a result of DSCR receiving a Hazard Ranking System (HRS) score that made it eligible for the list.

In 1990, DLA, DSCR, USEPA, and VDEQ signed a Federal Facilities Agreement (FFA) that established DLA as the lead federal agency responsible for evaluating, selecting, and executing necessary, feasible, and reasonable remedial actions to assure protection of human health and the environment from releases at DSCR. The Environmental Restoration Program at DSCR is being conducted under CERCLA, as amended, and has been organized into 13 OUs, including 9 source (soil) OUs, 3 groundwater OUs, and

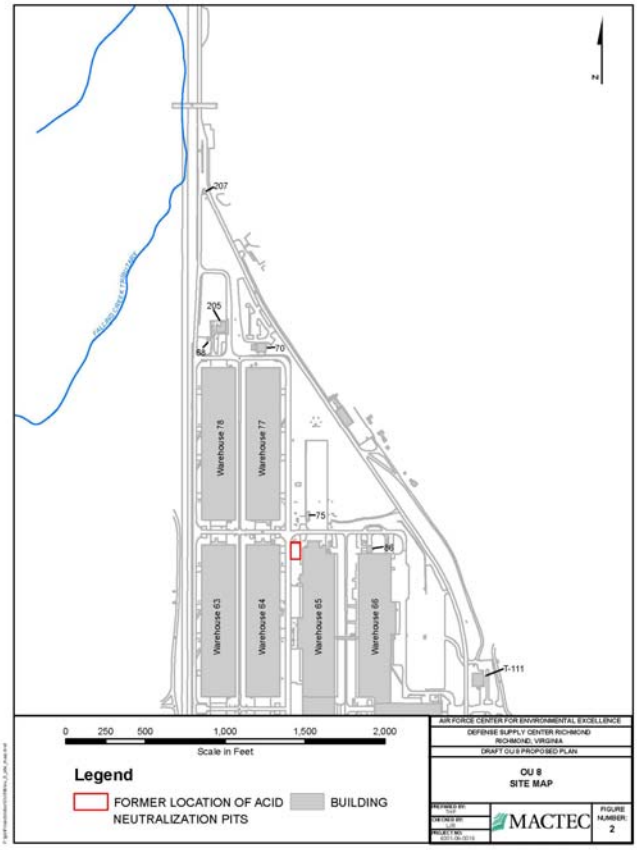
1 groundwater interim action OU. The 13 OUs are as follows:

OU 1 – Open Storage Area
OU 2 – Area 50 Source Area
OU 3 – National Guard Source Area
OU 4 – Fire Training Source Area
OU 5 – Acid Neutralization Pits Source Area
OU 6 – Area 50/Open Storage Area/ National Guard Area Groundwater
OU 7 – Fire Training Area Groundwater
OU 8 – Acid Neutralization Pits Area Groundwater
OU 9 – Interim Action for OU 6
OU 10 – Former Building 68
OU 11 – Transitory Shelter 202
OU 12 – Former Building 112
OU 13 – Polycyclic Aromatic Hydrocarbon (PAH) Area

Final Records of Decision (RODs) have been issued for OUs 1, 3, 4, 5 and 12. Final remedial actions have been implemented at OUs 1, 3 and 5. The ROD for OU 5 called for no further action. A final ROD with an interim remedy was issued for OU 9. (Interim remedial action for OU 6 groundwater was implemented as OU 9.) A removal action has been completed at OU 4.

Since 2000, DSCR has been integrating investigations and FFSs for source and groundwater OUs as part of a comprehensive, installationwide completion strategy that recognizes the interdependence of soil and groundwater impacts. This strategy involves eliminating or reducing continuing sources (i.e., through removal or treatment), controlling constituent movement in the environment, and controlling exposure to compounds that could pose an unacceptable human health or ecological risk. Decisions made under this strategy define performance criteria for DLA to meet remedial action objectives (RAOs) in an effective and efficient manner.

The ANPs were located approximately 25 feet northwest of Warehouse 65 as shown in Figure 2. The ANPs were concrete settling pits which received wastewater from metal cleaning operations at Warehouse 65 from 1958 to the early 1980s. In addition, solvents may have been transported from other installation locations and disposed in the ANPs.



The capacity of the primary pit and secondary pit was approximately 14,600 and 3,000 gallons, respectively. The two ANPs were located in a fenced area and both were approximately 6.5 feet deep. From 1958 to the late 1970s, wastewater from the primary tank was discharged to the storm sewer. After the addition of the secondary pit in the late 1970s, wastewater was discharged to the sanitary sewer. Solids that collected in the pit bottom were periodically removed and disposed at the Chesterfield County landfill. The ANPs were closed in 1985. The sludge was removed, the pit bottoms were washed, and the pits were backfilled with clean soil. At closure, the pit sides and bottoms were cracked. Concrete covers were placed over the pits to prevent reuse. The ANPs and surrounding impacted soils have been designated as OU 5. Impacted groundwater beneath and downgradient of the ANPs is OU 8.

The Proposed Plan for OU 8 is to implement all remedial actions necessary for reliable long-term protection of current and future receptors potentially impacted by the underlying groundwater quality of this

OU and to complete remedial actions in a reasonable time for a reasonable cost to taxpayers.

3.0 SITE CHARACTERISTICS

The remedial investigation (RI) of the ANPs, conducted from 1986 to 1987, identified low levels of volatile organic compounds (VOCs) in soil surrounding the pits. A pilot test for a soil vapor extraction (SVE) system was conducted in 1992 as part of the remedial design for the OU 5 ROD. (SVE is vacuum extraction of soil gas to reduce soil VOC concentrations.) Because soil concentrations met remediation goals after the pilot test, soil remediation was complete. Once the pits were covered, no further action was approved by USEPA and VDEQ.

For groundwater, poorly sorted (irregularly sized) sand and gravel extending to the underlying confining unit have been designated as the upper water-bearing unit (WBU). Coastal plain sediments below the confining unit constitute the lower WBU. Groundwater constituents attributed to the ANPs were detected in the upper WBU. No constituents of concern were identified in the lower WBU.

A dual phase extraction (DPE) system (which injects air and extracts impacted air and groundwater) was operated from June 1997 to January 2004. The DPE system was initiated as a treatability study under the OU 8 RI and was continued as a voluntary interim action. In the ANP study area, VOCs in groundwater have exceeded drinking water standards (maximum contaminant levels [MCLs]). Before initiating the DPE system, the groundwater plume extended from the former ANPs almost to the installation boundary. Today, the size of the plume is smaller and concentrations have decreased. These reductions were likely the result of source removal, natural attenuation (including biodegradation), and operation of the DPE system. Currently, the plume is well within the installation boundary.

As part of the RI/FS, a conservative screening assessment using drinking water criteria (MCLs and USEPA Region 3 Risk-Based Concentrations [RBCs]) was performed to identify Constituents of Potential Concern (COPCs). Five inorganic compounds and 12 volatile organic compounds were identified as COPCs and evaluated in the human health baseline risk assessment (HHBRA) (see Section 4.0).

Operational data for the DPE system indicated that groundwater concentrations had decreased and were no longer significantly changing. In 2004, only 2 of 29 wells had concentrations of PCE, TCE and DCE above MCLs and these 2 wells were near the plume center. No wells near the installation boundary had concentrations above MCLs.

Groundwater computer modeling was conducted to predict future concentrations of COPCs (if any) in off-installation groundwater and the estimated time for the plumes to migrate off-installation, if this was to occur. The model predicted that hypothetical COPC concentrations off-installation would not exceed MCLs (using moderate input assumptions for natural attenuation).

4.0 RISK SUMMARY

The HHBRA completed in conjunction with the RI was revised in the November 2005 FFS report. The HHBRA was revised because land use at the installation is expected to remain industrial, and a residential exposure scenario was originally considered. A residential exposure scenario is no longer a reasonable possibility, according to the DLA master plan.

The HHBRA evaluated potential exposure to groundwater constituents for current and future industrial workers, future construction workers, and hypothetical future residents located at the installation boundary. As noted in Section 3.0, a conservative screening assessment used drinking water criteria (MCLs and RBCs) and 17 COPCs were identified in the upper WBU.

The only potentially complete exposure pathway for current and future on-site industrial workers was groundwater vapor intrusion to indoor air. The USEPA Johnson and Ettinger model was used to estimate indoor volatile COPCs concentrations for human exposure.

Future construction workers could be exposed to groundwater during subsurface excavation. Potential

exposure for future construction workers considered groundwater ingestion, dermal contact with groundwater, and vapor inhalation while working in a trench.

Potential hypothetical exposure for future residents located at the installation boundary included ingestion (potable water use), dermal contact during showering, inhalation of volatiles during showering, and inhalation of subsurface emissions in indoor air. The current extent of groundwater impacts does not extend off the installation.

Using reasonable maximum exposure constituent concentrations, no unacceptable noncancer hazards or cancer risks were estimated for current or future industrial workers. A hazard index of 2 was estimated for future construction workers. Trichloroethylene (TCE) was selected as a Constituent of Concern (COC) because most of the noncancer risk estimate was associated with inhalation of TCE while working in a trench. Noncancer risks for hypothetical future residents were acceptable. Namely, the hazard index was less than the USEPA and DLA target of 1. (Noncancer health effects have a threshold, below which no adverse impacts are expected.) Using modeled concentrations to project future risks, the estimated cancer risk to the hypothetical future resident located at the installation boundary was 6×10^{-5} (which corresponds to a 6 in 100,000 chance of adverse effects). The majority of this hypothetical future risk was due to ingestion of vinyl chloride (VC) in groundwater and VC was selected as the second groundwater COC. This risk level is within the range of 10^{-6} to 10^{-4} (or a 1 in 1,000,000 to a 1 in 10,000 chance) identified by the USEPA as being generally acceptable. (See 40 CFR Section 300.430 (e)(2)(i)(A)(*2*). Hypothetical carcinogenic risk exceeded the DLA target of 1×10^{-6} for off-installation exposure. However, this risk estimate is very conservative (highly unlikely to occur) due to the following:

- Impacted groundwater currently remains on the installation, and the areal extent decreased prior to operation of the DPE system
- No off-installation receptors exist at the property boundary, and future development at the boundary is unlikely because land immediately off-installation is mostly developed.
- Groundwater is not used for drinking water in the area given available municipal water supply
- The upper WBU is an unsuitable source of potable water given capacity limitations and iron fouling problems experienced at the installation
- A county ordinance requires the use of municipal water for potable purposes where available
- The model used to predict future constituent concentrations at the installation boundary is likely to estimate higher concentrations than would actually occur (conservative)
- The risk estimate was based on conservative assumptions about the frequency and duration of an individual's exposure which would tend to overestimate actual risk

No ecological receptors were identified for OU 8.

Based on human health risk, it is the lead agency's current judgment that the preferred alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

5.0 REMEDIAL ACTION OBJECTIVES

The RAOs for OU 8 groundwater in the upper WBU are to:

1. Prevent future off-installation exposure to COCs exceeding chemical-specific Applicable Relevant and Appropriate Requirements (ARARs). Future exposure routes include ingestion of and dermal contact with groundwater and inhalation of volatiles from vapor intrusion or during showering;

2. Protect future construction workers during intrusive activities and protect current and future on-site industrial workers from exposure to groundwater used as a potable water source; and

3. Reduce groundwater COCs to meet chemical specific ARARs.

6.0 RESPONSE ACTION

After this Proposed Plan has been reviewed during the public comment period and public comments have been evaluated, the preferred alternative for OU 8, the basis for selection, performance expectations, and contingency planning will be presented in a Record of Decision (ROD). A Responsiveness Summary that addresses public comments will also be incorporated in the ROD.

7.0 SUMMARY OF REMEDIAL ACTION ALTERNATIVES

Three remedial action alternatives were developed and evaluated in the FFS with respect to effectiveness, implementability, cost, and meeting RAOs. Costs include capital, annual operation and maintenance (O&M), and total present worth (PW). (Total PW represents the sum of capital and O&M costs discounted to a base year. Total PW allows a comparison of alternatives with expenditures made in different time periods.) These remedial action alternatives are briefly described below. Additional information can be found in the November 2005 FFS report.

ALTERNATIVE 1: NO ACTION

CERCLA requires that "No Action" be evaluated to establish a baseline for comparison to other remedial alternatives. No action leaves the impacted groundwater in place without measures to prevent exposure.

The only cost included was for the five-year reviews. The estimated costs were based on a 30-year period (6 five-year reviews) and a 2.5 percent annual discount rate.

Estimated Capital Cost:	$ 0
Estimated 5-Year Review Cost:	$ 10,500 each
Estimated Total PW Cost:	$ 54,300

ALTERNATIVE 2: INSTITUTIONAL CONTROLS AND MONITORED NATURAL ATTENUATION (MNA) WITH A CONTINGENCY FOR IN SITU BIOREMEDIATION

Natural attenuation of COCs will be monitored and groundwater use for potable purposes will be prohibited on the installation. The land will be used solely for industrial use until conditions allow for unlimited use and unrestricted exposure to groundwater. Land use controls will be attached to the property deed to restrict groundwater use and prohibit residential or childcare-related land use, should the property change ownership in the future before completion of the remedy. MNA relies on natural biological, chemical, and physical processes that, under favorable conditions, act without human intervention to reduce constituent mass and concentrations in groundwater. A contingency plan such as, but not limited to, in situ bioremediation (adding chemicals or nutrients to enhance natural attenuation) would be implemented if RAOs will not be met within 30 years or if constituents migrate off-installation in a concentration exceeding ARARs.

The estimated costs include a 30-year monitoring period, 6 five-year reviews, semi-annual sampling in years 1 to 3, annual sampling in years 4 to 30, and a 2.5 percent annual discount rate.

Estimated Capital Cost:	$ 92,100
Estimated 5-Year Review Cost:	$ 15,000 each
Estimated Annual O&M (yrs 1-3):	$ 98,500
Estimated Annual O&M (yrs 4-30):	$ 35,500
Estimated Total PW Cost:	$ 1.5 million

ALTERNATIVE 3: INSTITUTIONAL CONTROLS AND IN SITU BIOREMEDIATION

Alternative 3 is similar to Alternative 2, except it includes chemical and/or nutrient injection in areas of higher concentrations to accelerate the natural

attenuation rate. The cost estimate was based on a natural attenuation rate that could triple with enhancement. The remedial action duration would therefore be reduced from 30 years estimated in Alternative 2 to 10 years. A contingency plan is included if in situ bioremediation is not effective.

The estimated costs considered a 10-year monitoring period, 2 five-year reviews, bench-scale testing in year 1, a field pilot study in years 2 to 3, semi-annual monitoring in years 4 to 7, annual monitoring in years 8 to 10, and a 2.5 percent annual discount rate.

Estimated Capital Cost:	$ 92,100
Estimated 5-Year Review Cost:	$ 15,000 each
Estimated Annual O&M (yr 1):	$153,500
Estimated Annual O&M (yrs 2-3):	$852,500
Estimated Annual O&M (yrs 4-7):	$ 98,500
Estimated Annual O&M (yrs 8-10):	$ 43,500
Estimated Total PW Cost:	$ 3.1 million

8.0 EVALUATION OF ALTERNATIVES

This section describes the nine CERCLA evaluation criteria and summarizes the more detailed analysis presented in the FFS for the three remedial action alternatives. The evaluation includes threshold criteria (requirements which must be met), balancing criteria (used to weigh trade-offs), and modifying criteria (anticipated agency and public acceptance).

Overall Protection of Human Health and the Environment

Overall protection of human health and the environment is the primary objective of remedial action. Alternative 1 does not satisfy the protectiveness criterion since it does not limit exposure or provide monitoring to confirm that conditions remain protective. Alternative 2 limits exposure through institutional controls, provides monitoring to document that MNA is effective, and monitors plume stability. Alternative 3 is similar to Alternative 2, but the natural attenuation rate is increased.

Compliance with ARARs

ARARs include groundwater MCLs, and risk-based levels are to be considered (TBC) criteria where MCLs do not exist. Compliance with ARARs cannot be verified for Alternative 1 since monitoring is not conducted on- or off-installation. Alternative 2 would meet ARARs on-installation where MNA reduces concentrations below MCLs and/or risk-based levels and would monitor that concentrations above ARARs do not migrate off-installation. Alternative 3 is similar to Alternative 2, but ARARs could be attained in a shorter time frame. In addition, substantive compliance with applicable permitting requirements would be necessary, or waiver justified, for injection wells with Alternative 2 (if the contingency is implemented) and Alternative 3.

Long-Term Effectiveness and Permanence

Alternative 1 is not effective because exposure to groundwater on the installation is not restricted. In addition, concentrations at the property boundary would not be verified. Under Alternatives 2 and 3, institutional controls can be very effective in limiting exposure and therefore in managing risk to receptors. MNA has been shown to reduce constituent concentrations and mass over time at numerous sites, including DSCR. Monitoring will document effectiveness, and contingency plans can be initiated if needed to prevent/minimize off-installation migration. Under in situ bioremediation, constituent degradation rates would be faster. Once constituent concentrations are reduced by MNA, treatment is permanent.

Reduction in Toxicity, Mobility, and Volume through Treatment

Natural attenuation is a treatment component of each alternative and is a process where constituent concentrations and mass are reduced over time. Toxicity, mobility, and volume are correspondingly reduced over time. Intermediate degradation compounds (daughter products) can be more toxic or mobile, but these are temporary and are eventually reduced as well. Under Alternative 1, monitoring is not conducted, and therefore, the attenuation process is not documented. COC concentrations will be quantified and compared to risk-based levels and/or MCLs with both Alternatives 2 and 3.

Short-Term Effectiveness

Short-term effectiveness is used to evaluate risk to on-site workers and the nearby community during remedial action implementation. This criterion does not apply to Alternative 1 in the absence of any construction. Under Alternatives 2 and 3, institutional controls are administrative restrictions and are effective immediately. Groundwater sampling and analysis would pose minimal risk to workers and no risk to the community. Subsurface injection with Alternative 2 (if the contingency is implemented) and Alternative 3 is not expected to adversely impact workers and should not pose a risk to the community.

Implementability

Alternative 1 is the simplest to implement. No construction, specialized equipment, or materials are utilized. Only agency approval of five-year reviews is required. With Alternatives 2 and 3, groundwater monitoring is straightforward to implement since materials and services are readily available. Institutional controls require some coordination with USEPA, VDEQ, and local/county agencies. Some construction would occur during injection well installation with Alternative 2 (if the contingency is implemented) and Alternative 3.

Cost

The cost comparison of alternatives is based on total PW which includes capital and O&M costs. Present worth costs were calculated using a 2.5 percent annual discount rate. A 30-year monitoring period was used for Alternatives 1 and 2, and a 10-year monitoring period was used for Alternative 3. Alternative 1 is the least expensive, and Alternative 3 is the most expensive.

Alternative 1: Total PW Cost = $54,000
Alternative 2: Total PW Cost = $1.5 million
Alternative 3: Total PW Cost = $3.1 million

Regulatory Agency Acceptance

Alternative 1 does not document protectiveness and does not prevent potential exposure. Therefore, Alternative 1 is not preferred. USEPA and the VDEQ support Alternative 2 because it is predicted to be protective of human health and the environment at a significantly lower cost than Alternative 3. If future monitoring determines that RAOs are not being achieved, a contingency such as in situ bioremediation to enhance natural attenuation can be implemented.

Community Acceptance

Community acceptance of the preferred alternative will be evaluated based on comments received during the public comment period for this Proposed Plan. A Responsiveness Summary will be included in the OU 8 ROD. Community acceptance is anticipated since Alternative 2 should be protective at a lower cost.

9.0 SUMMARY OF THE PREFERRED ALTERNATIVE

Based on the evaluation of alternatives, DLA considers Alternative 2, institutional controls and MNA with in situ bioremediation as a possible contingency, to be the preferred alternative to address groundwater in the ANPs area (designated as OU 8). Alternative 2 is selected because it:

- Is protective of human health and the environment
- Is expected to meet ARARs (Constituents were predicted to reach the installation boundary in 20 years at concentrations below drinking water standards, MCLs)
- Provides monitoring, documentation, and evaluation of natural attenuation
- Provides a contingency plan for additional remedial action if natural attenuation does not meet RAOs in a timely manner
- Has been effective and permanent at other sites with similar COCs, and has been effective at the installation based on data collected from 1987 to 1997. For example, PCE decreased from 1,800 to 35 ug/L, and TCE decreased from 1,400 to 6 ug/L in well DMW-24A near the former pits. (These decreases were attributed to source removal and natural attenuation.)

- Meets USEPA preference for treatment in reducing toxicity, mobility, and volume
- Is straightforward to implement with no adverse short-term impacts
- Is more cost-effective than Alternative 3
- Is expected to have regulatory agency and community acceptance

Alternative 2 consists of the following principal components:

- Monitoring groundwater for chemical and geochemical parameters to document that off-installation conditions remain below chemical-specific ARARs
- Documenting that MNA is reducing constituent mass and concentrations over time
- Implementing institutional controls to prevent potable use of groundwater on the installation and to ensure industrial use only of the affected area
- Implementing a deed restriction which prohibits groundwater use installationwide for potable purposes and use for residential or childcare purposes, if the property is transferred
- Documenting continued protectiveness during CERCLA mandated five-year reviews until such time as groundwater constituents no longer remain at concentrations that preclude unlimited use and unrestricted exposure or until regulatory requirements for five-year reviews are terminated.

10.0 COMMUNITY PARTICIPATION

DLA provides information to the public regarding ongoing Environmental Restoration Program activities at DSCR through public meetings, publication of a Community Newsletter and Fact Sheets, the Administrative Record, the Community Involvement Plan (September, 2003), and announcements published in the *Richmond Times Dispatch*. DLA encourages the public to gain a more comprehensive understanding of OU 8 and CERCLA activities that have been conducted at the installation.

A DSCR Restoration Advisory Board (RAB) was established in January 2002. The RAB currently holds monthly meetings to exchange information among community members and government agencies. These meetings are generally the second Monday of each month. RAB meetings are open to the public. For additional information regarding RAB meeting schedules and locations, contact the DSCR Public Affairs Officer at (804) 279-5896.

The public comment period for this Proposed Plan offers the public an opportunity to provide input to the OU 8 remedial action planning process. The Proposed Plan is available in the Administrative Record (see "Dates to Remember" on page 1 of this Proposed Plan). The public comment period will begin on June 2**,** 2006 and end on July 17**,** 2006. A public meeting will be held at 7:30 p.m. on June 27**,** 2006, at the Bensley Community Center to provide an additional opportunity for public comments on the Proposed Plan. All interested parties are encouraged to attend and learn more about the OU 8 alternatives developed and the elements of the preferred alternative.

Glossary of Terms

Specialized terms used in this Proposed Plan are defined below:

Administrative Record – Documents made available to the public including reports used in making remedial action decisions.

Applicable or Relevant and Appropriate Requirements (ARARs) – The federal and state laws that a selected remedy should meet. These requirements may vary among sites and alternatives.

Human Health Baseline Risk Assessment (HHBRA) – An evaluation of the potential carcinogenic health risks and non-carcinogenic hazards associated with potential exposure of susceptible current and future human or ecological receptors to site-related constituents in environmental media (i.e., soil, groundwater, air, surface water, and sediment) assuming no action is taken to remedy conditions at the site.

Cleanup – Action taken to mitigate a release or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often broadly used to describe response actions including phases of remedial and removal actions.

Chemical of Concern (COC) – If the chemical-specific risk estimate for a COPC is greater than an acceptable risk level (i.e., a hazard index greater than 1 or excess cancer risk greater than 10^{-5}), then the chemical is selected as a chemical of concern or COC. Risk-based cleanup levels are developed for COCs.

Chemical of Potential Concern (COPC) – A chemical that is selected for the risk assessment process because it exceeds a screening value or is frequently detected.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) – A federal law passed in 1980 and subsequently amended. CERCLA is commonly referred to as the Superfund Law. The act created a special tax (on the petroleum refining and chemical manufacturing industries). The tax proceeds were placed in a trust fund to investigate and cleanup abandoned or uncontrolled hazardous waste sites that endanger public health, welfare, or the environment. The taxing and funding provisions of the Act lapsed in 1995 and have not been renewed by Congress.

Five-Year Review – A process to evaluate the remedial action performance and determine if conditions remain protective of human health and the environment. CERCLA as amended and the National Contingency Plan specify that remedial actions which result in hazardous substances, pollutants, or contaminants remaining at a site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure protection of human health and the environment.

Groundwater – Water found beneath the ground surface that fills pores in earth materials such as sand, soil, gravel, or rock. In a productive water-bearing unit (known as an "*aquifer*"), groundwater occurs in sufficient quantities that it can be extracted for drinking water, irrigation, and other purposes.

Hazard Index (HI) – For each non-carcinogenic COPC and exposure pathway included in the risk assessment, the chemical-specific hazard quotients are summed to evaluate cumulative risk for a specific receptor. The sum of the hazard quotients is the hazard index.

Hazard Quotient – The ratio of the daily dose of a non-carcinogenic site-related chemical due to onsite exposure divided by the reference dose for that chemical. The reference dose represents the daily chemical intake that is not expected to cause adverse effects.

Hazard Ranking System (HRS) – A scoring system used by USEPA to evaluate potential relative risks to public health and the environment resulting from releases or threatened releases of hazardous substances. This score is the primary factor used to decide whether a hazardous waste site should be promulgated to the National Priorities List.

Maximum Contaminant Level (MCL) -The maximum permissible level of a contaminant in a public water system. MCLs are defined in the Code of Federal Regulations (40 CFR 141, the National Primary Drinking Water Regulations which implement portions of the Safe Drinking Water Act). MCLs are legally enforceable standards and are ARARs for OU 8.

National Priorities List (NPL) – The USEPA's list of uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response. The list is based primarily on the score that a site receives under the HRS. The USEPA is required to update the NPL at least once per year.

Present Worth Analysis – A method to evaluate expenditures that occur over different time periods. By discounting all costs to a common base year, the costs for different remedial action alternatives can be compared. When calculating present worth costs for Superfund sites, capital as well as operation & maintenance (O&M) costs are included.

Proposed Plan – A public participation requirement of CERCLA as amended, in which the lead federal agency summarizes the preferred cleanup strategy, the rationale for the preference, the alternatives evaluated in the remedial investigation/feasibility study, and any ARAR waivers proposed for site cleanup. The Proposed Plan solicits public review and comment on all alternatives under consideration.

Public Comment Period – A prescribed period during which the public may review and comment on various CERCLA remedial action documents. For example, a minimum 30-day comment period is mandated in the National Contingency Plan to allow interested community members to review and comment on a Proposed Plan. Advance notification of the Public Comment Period dates must be published in a local newspaper.

Record of Decision (ROD) – A public document that identifies the selected remedy, the final remedial action objectives (RAOs), measures to achieve RAOs, the basis for the decision, remedial action performance expectations, metrics to assess RAO progress, and a contingency plan to address unanticipated performance concerns. The ROD is based on the information and technical analysis generated during the remedial investigation/feasibility study, consideration of applicable or relevant and appropriate requirements (ARARs), and consideration of public comments. All information used to make a final remedy decision must be documented in the site Administrative Record.

Remedial Action – The means selected to achieve RAOs; the construction or implementation phase that follows the remedial design of the selected cleanup alternative at an NPL site.

Remedial Investigation/Focused Feasibility Study (RI/FFS) – Investigative and analytical studies performed as the basis for remedial action decision-making. The RI/FFS is intended to:

- Gather information necessary to define the impacted media at and near a site; identify potentially exposed human and ecological receptors; and determine the type, magnitude, extent, and fate of constituents;
- Identify (or waive) regulatory requirements that will affect the remedial action selection and implementation;
- Establish remedial action objectives (RAOs) and cleanup criteria;
- Identify and screen remedial technologies and develop remedial action alternatives;
- Conduct a detailed analysis of alternatives (including cost); and
- Develop performance metrics to assess the effectiveness of meeting RAOs.

Target Cleanup Level – The acceptable risk-based concentration of a COC. On-site concentrations of COCs exceeding the target cleanup level require remediation.

USEPA Region 3 Risk-Based Concentrations (RBCs) – Chemical concentrations in water or soil corresponding to acceptable risk levels (a hazard quotient of 1 or an excess cancer risk of 1×10^{-6}). RBCs are used to screen sites and select COPCs.

FOR MORE INFORMATION

For more information on the environmental program at DSCR or the Proposed Plan, please contact the following:

DLA Contact:

Ms. Kim Turner
Public Affairs Officer (DSCR-DSA)
Defense Supply Center Richmond
8000 Jefferson Davis Highway
Richmond, Virginia 23297-5000
email: Kim.Turner@dla.mil
Fax: (804) 279-6084

USEPA Contact:

Ms. Trish Taylor
Community Involvement Section (3HS43)
US Environmental Protection Agency, Region 3
1650 Arch Street
Philadelphia, Pennsylvania 19103
email: taylor.trish@epa.gov

VDEQ Contact:

Mr. James Cutler
Virginia Department of Environmental Quality
Office of Remediation Programs
629 East Main Street, 4th Floor
Richmond, Virginia 23219
email: jlcutler@deq.virginia.gov

COMMUNITY PARTICIPATION

Comment on the Defense Logistic Agency's OU 8 Proposed Plan at the public meeting or fax, email, or mail your comments to:

Ms. Kim Turner
Public Affairs Officer (DSCR-DSA)
Defense Supply Center Richmond
8000 Jefferson Davis Highway
Richmond, Virginia 23297-5000
email: Kim.Turner@dla.mil
Fax: (804) 279-6084
All comments must be postmarked by May X, 2006.

DATES TO REMEMBER

June 27, 2006
The public meeting for comments on the Proposed Plan will be held starting **7:30 p.m.** at the

Bensley Park and Community Center
2900 Drewrys Bluff Rd
Richmond, VA 23237

All comments must be postmarked by **July 17, 2006**, for consideration.

COMMENTS:

Mailing Coupon

If you would like to be added to the DSCR mailing list and receive copies of future newsletters and fact sheets, please fill out the coupon below and mail it to:

Ms. Kim Turner
Public Affairs Officer (DSCR-DSA)
Defense Supply Center Richmond
8000 Jefferson Davis Highway
Richmond, Virginia 23297-5000

Name: _____

Address: _____

City _____ State _____ Zip _____

E-mail address _____

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