

**GROUNDWATER INTERIM RECORD OF DECISION
NORTH, EAST, AND WEST INDUSTRIAL OPERABLE UNIT
TRAVIS AIR FORCE BASE**

Final

60th Air Mobility Wing
Travis Air Force Base, California

Contract Number F41624-94-D-8049/D.O. 0035

3 December 1997

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS.....	i - iv
LIST OF FIGURES	v
LIST OF TABLES.....	vi - vii
LIST OF ACRONYMS AND ABBREVIATIONS.....	viii - xii
PART I DECLARATION	1-10
PART II DECISION SUMMARY	11- 151
1.0 NEWIOU DESCRIPTION	11
1.1 Physical Description	13
1.2 Land Use	16
1.3 Ecology	17
1.4 Geology and Hydrogeology	19
1.4.1 Geology.....	19
1.4.2 Hydrogeology	23
1.4.3 Groundwater Gradient and Flow	23
1.4.4 Aquifer Tests.....	26
1.4.5 Regional Groundwater Use.....	28
1.4.6 Surface Water.....	29
2.0 OVERVIEW OF TRAVIS AFB ENVIRONMENTAL PROGRAMS	31
2.1 Non-CERCLA Environmental Programs	31
2.1.1 Air Force Regulations and Management Action Plan	31
2.1.2 Resource Conservation Recovery Act and Hazardous Waste Management Program.....	32
2.1.3 Petroleum-Only Contaminated Sites Program (POCOS)	33
2.1.4 Stormwater Discharge Permit	33
2.1.5 Pollution Prevention Program.....	33
2.2 CERCLA Environmental Programs.....	34
2.2.1 CERCLA Process.....	34
2.2.1.1 General CERCLA Process, Remedial Investigation/ Feasibility Study/Record of Decision/Proposed Plan/ Remedial Design/Remedial Action.....	34

TABLE OF CONTENTS (Continued)

	Page
2.2.2 CERCLA Activities at Travis AFB	36
2.2.2.1 Removal Actions.....	39
2.2.2.2 Treatability and Pilot Studies.....	40
2.2.3 CERCLA Activities for Groundwater at NEWIOU	41
2.2.3.1 Human Health Risk Assessments	41
2.2.3.2 Ecological Risk Assessments.....	41
2.2.3.3 RI/FS Activities	42
2.2.3.4 Community Participation.....	42
2.2.3.5 Remedial Design/Remedial Action.....	44
3.0 SUMMARY OF NEWIOU GROUNDWATER REMEDIAL INVESTIGATION.....	 45
3.1 Nature and Extent of Contamination	45
3.1.1 North Operable Unit	46
3.1.2 East Industrial Operable Unit	49
3.1.3 West Industrial Operable Unit.....	53
3.2 Conceptual Model of Contamination.....	55
3.3 Risk Evaluation.....	60
3.4 Contaminants of Concern	72
3.5 Summary	73
4.0 SUMMARY OF NEWIOU GROUNDWATER FEASIBILITY STUDY.....	75
4.1 Alternative Description.....	75
4.1.1 No Action.....	77
4.1.2 Natural Attenuation/Monitoring (Institutional Actions).....	77
4.1.3 Extraction, Treatment, and Discharge	77
4.1.3.1 Extraction.....	78
4.1.3.2 Treatment.....	78
4.1.3.3 Discharge	79
4.2 Summary of Comparative Analysis of Alternatives	79
4.2.1 Threshold Criteria	80
4.2.1.1 Overall Protection of Human Health and the Environment.....	 80
4.2.1.2 Compliance with ARARs	80

TABLE OF CONTENTS (Continued)

	Page
4.2.2 Primary Balancing Criteria	83
4.2.2.1 Long-Term Effectiveness and Permanence	83
4.2.2.2 Reduction of Toxicity, Mobility, and Volume through Treatment.....	83
4.2.2.3 Short-Term Effectiveness	83
4.2.2.4 Implementability	84
4.2.2.5 Cost	84
4.2.3 Modifying Criteria	85
4.2.3.1 State Acceptance.....	85
4.2.3.2 Community Acceptance.....	87
4.2.4 Comparative Analysis.....	87
4.2.4.1 Total Score.....	89
4.2.4.2 Benefit/Cost Ratio.....	89
4.2.4.3 Conclusion	89
 5.0 INTERIM REMEDIAL ACTIONS.....	 91
5.1 Selected Interim Remedial Actions	91
5.1.1 Justification for Selected Interim Remedial Actions	97
5.1.2 Institutional Actions.....	99
5.1.3 Groundwater Monitoring.....	100
5.2 Alternative Description.....	100
5.2.1 Alternative 2 – Natural Attenuation/Monitoring	100
5.2.1.1 Definition of Natural Attenuation.....	102
5.2.2 Alternative 3 – Extraction, Treatment, and Discharge	104
5.2.2.1 Extraction Strategy and Technology.....	104
5.2.2.2 Treatment Strategy and Technologies	105
5.2.2.3 Discharge	108
5.3 Statutory Determinations	110
5.3.1 Protectiveness	111
5.3.2 Applicable or Relevant and Appropriate Requirements.....	111
5.3.3 Cost Effectiveness.....	112
5.3.4 Use of Permanent Solutions, Alternative Treatment, or Resource Recovery Technologies.....	112
5.3.5 Preference for Treatment as a Principle Element	112
5.3.6 State and Community Acceptance.....	113
5.4 RD/RA Implementation and Schedule.....	113
5.5 Documentation of Significant Changes	115

TABLE OF CONTENTS (Continued)

	Page
6.0	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS AND PERFORMANCE STANDARDS.....116
6.1	Overview.....116
6.2	ARARs Identification, Development, and Evaluation.....118
6.3	Interim Record of Decision Concept120
6.4	Determination of ARARs for the Interim Action120
6.5	ARARs Evaluation and Discussion121
7.0	REFERENCES149
PART III	RESPONSIVENESS SUMMARY 152 - 156
APPENDIX A:	SITE-SPECIFIC SUMMARIES.....A-1 - A-73
APPENDIX B:	MONITORING STRATEGY.....B-1 - B-10

LIST OF FIGURES

	Page
1-1	Regional Location Map, Travis AFB12
1-2	Travis AFB and Operable Units14
1-3	Travis AFB/Major Annexes Location Map15
1-4	Geological Map of Travis AFB and Vicinity20
1-5	Hydrologic Boundaries and Geographic Proximity of Sites25
1-6	Location of On-Site Surface Water and Storm Sewer Systems, Travis AFB.....30
3-1	NEWIOU Groundwater Sites and Extent of Groundwater Contamination47
3-2	NOU Sites and Areas with Groundwater Contamination48
3-3	EIOU Sites with Groundwater Contamination50
3-4	WIOU Sites with Groundwater Contamination54
3-5	Maximum Contaminant Concentration from Monitoring Wells, NEWIOU Groundwater Sites57
3-6	Areas of Potential Groundwater Inflow into Stormwater Sewer System, Travis AFB59
4-1	The Nine CERCLA Criteria.....81
5-1	Selected Alternatives for NEWIOU IRP Sites with Groundwater Contamination.....94

LIST OF TABLES

		Page
1-1	Geologic Column – Travis AFB and Vicinity, California.....	21
1-2	Summary of Hydraulic Conductivity Values.....	27
2-1	Description of NEWIOU IRP Sites with Groundwater Contamination	37
3-1	Summary of IRP Sites, Groundwater Contaminants, and Risks.....	61
3-2	Summary of NEWIOU Groundwater Sites Carried Forward to the NEWIOU FS	74
4-1	Comparison of Alternatives Versus the CERCLA Threshold and Balancing Evaluation Criteria.....	82
4-2	Summary of Comparative Costs (thousands of dollars)	86
4-3	Remedial Alternative Evaluation Criteria Rating System	88
5-1	Interim Remedial Action Objectives for NEWIOU Groundwater IROD.....	92
5-2	Interim Remediation Goals for NEWIOU Groundwater IROD	93
5-3	Selected Interim Remedial Actions for NEWIOU IRP Sites with Groundwater Contamination.....	95
6-1	Federal ARARs - Groundwater Remediation (IROD) Waste Transfer, Treatment, and Storage and Disposal Requirements	127
6-2	State ARARs - Groundwater Remediation (IROD) Air Remediation Requirements.....	133
6-3	State ARARs - Groundwater Remediation (IROD) Fish and Game Requirements	135
6-4	State ARARs - Groundwater Remediation (IROD) Water Board Requirements.....	137

LIST OF TABLES (Continued)

	Page
6-5	Federal ARARs - Groundwater Remediation (IROD) Requirements under the US Code and Related Regulations.....140
6-6	NPDES Effluent Limitations for Treated Groundwater145
6-7	Discharge Limitations.....147
6-8	Effluent Treatment Levels for Beneficial Reuse Discharges to Land for Irrigation Purposes148

LIST OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
ARARs	Applicable or Relevant and Appropriate Requirements
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
Cal-EPA	California Environmental Protection Agency
CE	Civil Engineering
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFGC	California Fish and Game Code
COCs	Contaminants of concern
COPECs	Contaminants of Potential Ecological Concern
CPT	Cone Penetrometer Testing
CRP	Community Relations Plan
CTVs	Critical Toxicity Values
DAA	Detailed Analysis of Alternatives
DCA	Dichloroethane
DCE	Dichloroethene
DNAPLs	Dense Non-Aqueous Phase Liquids

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

DTSC	Department of Toxic Substances Control
EIOU	East Industrial Operable Unit
ERA	Ecological Risk Assessment
FFA	Federal Facilities Agreement
FS	Feasibility Study
FTA	Fire Training Area
gpm	gallons per minute
HQ	Hazard Quotient
HRA	Health Risk Assessment
HWCL	Hazardous Waste Control Law
IRG	Interim Remediation Goal
IROD	Interim Record of Decision
IRP	Installation Restoration Program
ISA	Initial Screening of Alternatives
JFSA	Jet Fuel Spill Area
LLNL	Lawrence Livermore National Laboratories
LNAPL	Light Non-Aqueous Phase Liquid
MAC	Military Airlift Command

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

MAP	Management Action Plan
MATS	Military Air Transport Services
MCL	Maximum Contaminant Level
MEK	methyl ethyl ketone
µg/L	micrograms per liter
msl	mean sea level
MW	monitoring well
NAAP	Natural Attenuation Assessment Plan
NCP	National Contingency Plan
NEWIOU	North, East, and West Industrial Operable Unit
NOU	North Operable Unit
NPDES	National Pollution Discharge Elimination System
O&M	Operation and Maintenance
OSA	Oil Spill Area
OU	operable unit
OWS	Oil/Water Separator
P2 MAP	Pollution Prevention Management Action Plan
PAH	Polycyclic Aromatic Hydrocarbon
PCB	polychlorinated biphenyl

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

PCE	tetrachloroethene
PCWQCA	Porter-Cologne Water Quality Control Act
POCOS	Petroleum-Only Contaminated Sites
POTW	Publicly Owned Treatment Works
PP	Proposed Plan
ppb	parts per billion
PRG	Preliminary Remediation Goal
RAB	Restoration Advisory Board
RAOs	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
RME	Reasonable Maximum Exposure
ROD	Record of Decision
SAC	Strategic Air Command
SARA	Superfund Amendments and Reauthorization Act of 1986
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SIP	State Implementation Plan
SSA	Solvent Spill Area

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

SSRW	Storm Sewer Right of Way
SVE	Soil Vapor Extraction
SVOC	semivolatile organic compound
SWRCB	State Water Resources Control Board
TARA	Tower Area Removal Action
TBC	To Be Considered
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbon
TPH-E	Total Petroleum Hydrocarbon - extractable
TPH-G	Total Petroleum Hydrocarbon - gasoline
TSDf	treatment, storage or disposal facility
USAF	United States Air Force
U.S. EPA	United States Environmental Protection Agency
USTs	Underground Storage Tanks
UV-OX	ultraviolet radiation and oxidation
VOC	volatile organic compound
WABOU	West/Annexes/Basewide Operable Unit
WIOU	West Industrial Operable Unit

PART I: DECLARATION

Site Name and Location

Department of the Air Force
Travis Air Force Base
Fairfield, California 94535-5000

Statement of Basis and Purpose

This Interim Record of Decision (IROD) presents the interim remedial actions for groundwater in the North, East, and West Industrial Operable Units (NEWIOU) at Travis Air Force Base (AFB or the Base) Superfund site in Solano County, California. The Air Force will develop a separate Record of Decision (ROD) to address NEWIOU sites with soil, sediment, and/or surface water contamination. The Air Force selected the interim remedial actions evaluated in the Groundwater IROD in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) 42 USC § 9601 *et seq.*, and with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (National Contingency Plan [NCP]). The Administrative Record identifies the documents used in the selection of the interim remedial actions. The Administrative Record is available for review at Travis AFB.

The U.S. Environmental Protection Agency (U.S. EPA), Region IX, concurs with the selected interim remedies. The State of California, through the California Environmental Protection Agency's Department of Toxic Substances Control (Cal-EPA/DTSC) and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), concurs with the selected interim remedies.

Assessment of the Site

Releases of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), dioxins, and metals have contaminated the groundwater at 15 sites within the NEWIOU at Travis AFB as a result of historic Base activities. Actual or possible releases of hazardous substances from these sites, if not addressed by implementing the response actions selected in the Groundwater IROD, may present a threat to public health and welfare, or to the environment.

Rationale for Interim ROD

The Air Force has developed interim remedial actions to address groundwater contamination in the NEWIOU. The Air Force has decided to prepare an IROD for groundwater sites rather than a final ROD in order to allow remediation of groundwater to begin quickly to reduce contamination and risk. The IROD establishes a five-year interim period after which a final ROD will establish the final remedial actions and final cleanup levels. The Air Force will use information from the interim remedial actions to allow for the selection of final cleanup levels and technically and economically feasible long-term actions under a final groundwater ROD. The Air Force will publish a public notice, hold a public comment period, and address the public's comments before the regulatory agencies finalize and approve the groundwater ROD.

The Air Force will complete a separate Proposed Plan (PP) and ROD for soil, sediment, and surface water sites in the NEWIOU.

Description of the Selected Interim Remedies

The Air Force considered three potential interim remedial alternatives to address contaminated groundwater in the NEWIOU: 1) Alternative 1 (No Action); 2) Alternative 2 (Natural Attenuation/Monitoring); and 3) Alternative 3 (Extraction, Treatment, and Discharge).

The Air Force has selected interim remedial alternatives for 13 of the 15 sites with groundwater contamination in the NEWIOU. The Air Force selected Alternative 1 (No Action)

for none of the sites. The Air Force selected Alternative 2 for one site (LF006), and Alternative 3 for seven sites. At five sites, the Air Force has selected Alternative 3 for a portion of the plume and deferred the alternative selection for the remaining portion. These five sites require additional characterization to determine if Alternative 2 or 3 is the most appropriate remedial alternative. At two sites, the Air Force will defer the selection of an alternative for the entire groundwater plume until the final ROD; the Air Force will perform additional characterization during the five-year interim period. The following table summarizes selected interim remedial alternatives:

Selected Alternative	No. of Sites	Site Names
Alternative 2	1	LF006
Alternative 3	7	FT004, FT005, SS029, SS030, SD031, SD034, SD036
Alternative 3 and portion of plume remedy deferred	5	LF007, SS016, ST032, SD033, SD037
Alternative selection deferred until final ROD	2	SS015, SS035
Total sites that will be addressed in the final ROD	15	

The Air Force chose the selected interim remedies, from many alternatives, as the best methods for containing, monitoring, and treating contaminated groundwater in the NEWIOU. These remedies address the potential risks to human health and the environment that could result from exposure to groundwater by human (e.g., workers and residents) and ecological (e.g., aquatic) receptors.

Based on the RI/FS, the Air Force has selected the most appropriate alternative(s) to reduce the potential risk at each site. The Air Force selected Alternative 3 (Extraction, Treatment, and Discharge) for all or part of 12 of the 15 groundwater sites in the NEWIOU (see Table 5-3).

For the remaining sites or portions of sites where Alternative 3 was not selected, the Air Force considered Alternative 2 (Natural Attenuation/Monitoring) as a possible interim action. The Air Force selected Alternative 2 for one site and deferred the selection of alternatives for the remaining sites.

The Air Force will submit a Groundwater NEWIOU Remedial Design/Remedial Action (RD/RA) Work Plan to the regulatory agencies for approval. The Groundwater NEWIOU RD/RA Work Plan will be a primary document according to the Federal Facilities Agreement (FFA). This Work Plan will provide a description of the overall rationale for treatment and discharge of extracted groundwater for all groundwater sites in the NEWIOU, and will include the RD/RA schedule and a decision matrix for selecting the treatment technologies at each site. The Air Force will provide an opportunity for public participation during the Remedial Design phase.

The Air Force will also submit a Natural Attenuation Assessment Plan (NAAP) to the regulatory agencies for approval. The NAAP will be a primary document according to the FFA and will include a schedule. A Natural Attenuation Decision Matrix will be included which will outline the method to determine which sites and/or portions of plumes are appropriate for remediation by natural attenuation (Alternative 2). In reference to the five sites where a portion of the plume is Alternative 3 and a portion has the alternative selection deferred, the NAAP will clearly explain the methodology to determine where Alternative 2 and Alternative 3 will be applied. Where the selection of an alternative is deferred for the entire site, the NAAP will describe the Air Force approach for evaluating natural attenuation. The NAAP is described in more detail in Section 5.0 (Alternative 2) and Appendix B.

In addition to the Groundwater NEWIOU RD/RA Work Plan, the Air Force will prepare a site-specific RD/RA work plan for each groundwater site within the NEWIOU. The site-specific RD/RA work plans will include details for monitoring and evaluation based on site-specific conditions. Each work plan will address placement of monitoring wells, protocols and frequency for monitoring, and evaluation procedures for determining if migration above water quality objectives is occurring. The agencies will review each of the site-specific RD/RA work

plans. If a contingency action is necessary to control migration, the Air Force will not wait until the end of the five-year interim period. The Air Force will request funding and implement the contingency action as soon as funding becomes available.

There is potential for contaminated groundwater to migrate along storm sewer lines and other preferential pathways. The Air Force will implement Alternative 3 at some sites to control migration of contaminated groundwater along preferential pathways. At other sites where the Air Force has deferred the remedy selection until the final ROD, the Air Force will employ monitoring and a contingency plan to ensure that preferential migration does not occur. At all sites with known or potential interface between the storm sewer and contaminated groundwater, the Air Force will investigate the interface during the Remedial Design (RD). At locations where the Air Force has found the contaminated groundwater to be migrating to the storm sewer or creek, the Air Force will use an interim remedial action such as pump and treat to control migration. Where pump and treat is used, the Air Force will monitor the effectiveness of this action; if the Air force finds that the pump and treat action is not adequately controlling the migration, the Air Force will initiate a contingency action such as repair or lining of the storm sewer.

The Air Force will implement interim remedial actions in accordance with the Groundwater IROD. The Air Force will monitor all sites, including those proposed for natural attenuation, and will evaluate the change in contaminant concentrations during the five-year interim period. The Air Force will utilize the monitoring results to evaluate the potential for natural attenuation under conditions present at Travis AFB. The Air Force and U.S. EPA are developing the protocol for monitoring the natural attenuation of chlorinated compounds. The Air Force and agencies will periodically review and evaluate data obtained from these actions to determine the effectiveness of the action(s) and the need for additional action(s). Five years after signing the IROD, the Air Force and agencies will hold a formal review. The Air Force and the agencies will use the information obtained to determine final remedial actions and cleanup levels that are technically and economically feasible at that time.

Declaration

These interim actions are protective of human health and the environment, are compliant with Federal and State Applicable or Relevant and Appropriate Requirements (ARARs) directly associated with these actions, and are cost-effective. These actions utilize permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable given the limited scope of the action. This action does not constitute the final remedy for groundwater at the Travis AFB NEWIOU sites. The Air Force and the agencies will address the statutory preference for remedies which reduce toxicity, mobility, or volume as a principal element at the time of the final groundwater ROD. The Air Force will base subsequent actions on the knowledge and experience gained during the interim action. Any future actions will fully address the principal threats posed by contaminated groundwater in the NEWIOU at Travis AFB.

Lead and Support Agency Acceptance
of the Interim Record of Decision for Groundwater
Travis Air Force Base, NEWIOU

This signature sheet documents agreement between the United States Air Force and the United States Environmental Protection Agency and the State of California, by the California Environmental Protection Agency, Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board on the Interim Record of Decision for groundwater in the NEWIOU at Travis Air Force Base. This sheet may be signed in counterparts by the respective parties.

Dan Opalski
Chief
Federal Facilities Cleanup Branch
U.S. Environmental Protection Agency, Region IX

Date

Anthony J. Landis, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
Chief of Operations
Office of Military Facilities

Date

Loretta K. Barsamian
San Francisco Bay Regional Water Quality Control Board
Executive Officer

Date

John B. Sams, Jr.
Lieutenant General, USAF
Air Mobility Command
Chairperson, Environmental Protection Committee

Date

Lead and Support Agency Acceptance
of the Interim Record of Decision for Groundwater
Travis Air Force Base, NEWIOU

This signature sheet documents agreement between the United States Air Force and the United States Environmental Protection Agency and the State of California, by the California Environmental Protection Agency, Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board on the Interim Record of Decision for groundwater in the NEWIOU at Travis Air Force Base. This sheet may be signed in counterparts by the respective parties.

Dan Opalski
Chief
Federal Facilities Cleanup Branch
U.S. Environmental Protection Agency, Region IX

Date

Anthony J. Landis, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
Chief of Operations
Office of Military Facilities

Date

Loretta K. Barsamian
San Francisco Bay Regional Water Quality Control Board
Executive Officer

Date

John B. Sams, Jr.
Lieutenant General, USAF
Air Mobility Command
Chairperson, Environmental Protection Committee

Date

Lead and Support Agency Acceptance
of the Interim Record of Decision for Groundwater
Travis Air Force Base, NEWIOU

This signature sheet documents agreement between the United States Air Force and the United States Environmental Protection Agency and the State of California, by the California Environmental Protection Agency, Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board on the Interim Record of Decision for groundwater in the NEWIOU at Travis Air Force Base. This sheet may be signed in counterparts by the respective parties.

Dan Opalski
Chief
Federal Facilities Cleanup Branch
U.S. Environmental Protection Agency, Region IX

Date

Anthony J. Landis, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
Chief of Operations
Office of Military Facilities

Date

Loretta K. Barsamian
San Francisco Bay Regional Water Quality Control Board
Executive Officer

Date

John B. Sams, Jr.
Lieutenant General, USAF
Air Mobility Command
Chairperson, Environmental Protection Committee

Date

Lead and Support Agency Acceptance
of the Interim Record of Decision for Groundwater
Travis Air Force Base, NEWIOU

This signature sheet documents agreement between the United States Air Force and the United States Environmental Protection Agency and the State of California, by the California Environmental Protection Agency, Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board on the Interim Record of Decision for groundwater in the NEWIOU at Travis Air Force Base. This sheet may be signed in counterparts by the respective parties.

Dan Opalski
Chief
Federal Facilities Cleanup Branch
U.S. Environmental Protection Agency, Region IX

Date

Anthony J. Landis, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
Chief of Operations
Office of Military Facilities

Date

Loretta K. Barsamian
San Francisco Bay Regional Water Quality Control Board
Executive Officer

Date

John B. Sams, Jr.
Lieutenant General, USAF
Air Mobility Command
Chairperson, Environmental Protection Committee

Date