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# MATHER AFB CALIFORNIA

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## ADMINISTRATIVE RECORD COVER SHEET

AR File Number 1319



DEPARTMENT OF THE AIR FORCE  
AIR FORCE BASE CONVERSION AGENCY

File: 17A-65  
B.L.H. 1319

1319 1

12 June 1997

MEMORANDUM FOR DISTRIBUTION

FROM: AFBCA/DB Mather  
10503 Armstrong Avenue  
Mather, CA 95655

SUBJECT: Transmittal of the Final Explanation of Significant Difference to the  
AC&W OU Record of Decision

1. Enclosed with this letter is the Final Explanation of Significant Difference (ESD) to the Aircraft Control and Warning (AC&W) Operable Unit Record of Decision which will allow discharge of treated water to Mather Lake. As required by Section 300.435 of the National Contingency Plan the Air Force will place the ESD into the Administrative Record for the AC&W Operable Unit and publish a notice summarizing the explanation of significant difference in a newspaper of major circulation.

2. The ESD was issued draft final for the second time on 9 April 1997. The ESD became final on 9 May 1997, thirty days after issuance of the draft final document, in accordance with the Mather AFB Federal Facility Agreement. The Final ESD was signed by the Acting Director of the Air Force Base Conversion Agency on 4 June 1997. The purpose of the signature is to provide statutory determination by the lead agency that the change in the remedy is significant but does not fundamentally change the remedy and that the remedy remains protective of human health and the environment. It is my understanding that Region IX of the US Environmental Protection Agency and the California Department of Toxic Substances are not required to sign the document; and that the Air Force has the approval and authority to proceed with the discharge to Mather Lake as specified by the ESD and supporting documentation. The discharge is scheduled to start on 13 June 1997, immediately following finalization of the AC&W Sampling and Analysis Plan which contains the monitoring requirements for the discharge to Mather Lake.

4. If you have any questions please contact myself at (916) 364-4009 or Mike Johnson at (916) 364-4007.

  
ANTHONY C. WONG  
BRAC Environmental Coordinator

Encl: Subject Document

DISTRIBUTION

HQ AFBCA/DB, Attn: Frank Duncan  
U.S. EPA Region IX, Attn: Kathleen Salyer (SFD-8-1)  
DTSC, Attn: Kent Strong  
RWQCB, Attn: James Taylor  
Sacramento County, Attn: Randall Yim

# Aircraft Control and Warning Operable Unit

Mather AFB, California

Final Explanation of Significant Difference  
to the AC&W OU Record of Decision

Discharge of Treated Groundwater to Mather Lake

AFBCA/DBM  
10503 Armstrong Avenue  
Mather, CA 95655  
(916) 364-4000

## 1. Introduction

This decision document presents an explanation of significant difference (ESD) from the Final Record of Decision (ROD) for the cleanup of the Aircraft Control and Warning Operable Unit (AC&W OU) at Mather Air Force Base, California [U.S. Air Force, 1993]. The ESD is developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments Reauthorization Act of 1986 (SARA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Under Section 117 (c) of CERCLA an ESD is required when significant (but not fundamental to the remedy selected in the ROD) changes are made to the final remedial action as described in the record of decision. This ESD follows recommendations in the US Environmental Protection Agency Guide to Addressing Pre-ROD and Post-ROD Changes [EPA, 1991].

The AC&W OU groundwater pump and treat system is not operating at a flow rate sufficient to demonstrate achievement of the ROD requirement to hydraulically capture the trichloroethylene (TCE) groundwater plume. The eight groundwater injection wells, which compose the discharge component of the pump and treat system, are unable to accept water at their design flow rates causing the overall system to operate at less than half the design rate of 270 gallons per minute (gpm). This ESD describes changes to the AC&W OU ROD to allow discharge of treated groundwater to Mather Lake in combination with or in place of injection, in order to operate the system at a rate sufficient to achieve plume capture. The treated water may also be used to irrigate Sacramento County park lands located at and near the site.

The United States (US) Air Force is the owner of the AC&W OU site, the responsible party for the contamination, and has been delegated authority by executive order to provide the necessary remedial action consistent with the NCP and CERCLA Section 104. The US EPA Region IX and State of California provide regulatory support and oversight for the investigations and cleanup activities through the Mather AFB Federal Facilities Agreement [US Air Force 1989]. The Department of Toxic Substances Control is the designated single state agency to represent the State of California to ensure compliance with appropriate California laws and regulations. To be approved, this ESD only requires signature from the Air Force as the lead Agency. The EPA and the State of California will have a thirty day opportunity to dispute this ESD, in accordance with the terms of the Federal Facilities Agreement signed July 1989.

This ESD has been included in the Administrative Record for the Aircraft Control and Warning Operable Unit as required in the NCP 300.825 (a)(2). The Administrative Record is located at 10503 Armstrong Ave, Mather, CA, 95655 and is open for inspection by the public between the hours of 7:30 a.m. to 4:30 p.m. The document is also located at an off-site public repository at the Rancho Cordova Community Library. The library is located at 9845 Folsom Blvd, Sacramento, CA, 95827, and is open Tuesday from 1:00 p.m. to 8:00 p.m.; Wednesday 11:00 a.m. to 6:00 p.m.; Thursday 11:00 a.m. to 8:00 p.m.;

and Friday and Saturday 1:00 p.m. to 5:00 p.m. A public comment period is not required for this ESD; however the Air Force is notifying the public of the availability of the ESD for the AC&W OU ROD in a fact sheet and a notice in the Sacramento Bee and the Grapevine Independent Newspaper.

## **2. Site Background**

This section provides a brief description of the AC&W OU, its history, contamination problems, and the selected remedy. More details can be found in the ROD and in the Administrative Record.

### **2.1 Site Description and History**

Mather AFB is an inactive military facility located approximately 10 miles east of Sacramento in Sacramento County, California, as shown in Figure 1. Mather AFB closed on 30 September 1993, pursuant to the Base Realignment and Closure Act. At the time of closure the base encompassed 5845 acres in an unsurveyed part of Township 8 North, Ranges 6 East and 7 East. Most of the of the base is currently leased to Sacramento County for use as a commercial airport and regional park.

The AC&W OU is located near the central part of Mather AFB, as shown in Figure 2. Vegetation at the AC&W OU consists of annual grasses and a few trees. Topography at the site consists of several low gentle hills. Surface elevations range from about 107 to 134 feet above mean sea level. Surface features overlying the AC&W plume includes a portion of the currently unoccupied military housing and a fenced radar facility operated by the Federal Aviation Administration (FAA). Surface runoff drains directly into an unnamed tributary of Morrison Creek which passes through the site.

A portion of the land associated with the AC&W OU has been conveyed through a federal transfer to the FAA for use as a radar tracking station. Much of the AC&W OU Site has been leased to Sacramento County for use park land. The Air Force plans to convey the park area to the county after the remedial action at the AC&W OU is operating effectively and the CERCLA 120(h) covenant is made. The downgradient boundary of the plume extends beneath a portion of the base housing area, which is currently unoccupied. The Air Force intends to convey that portion of base housing area which overlies the groundwater contamination to Sacramento County after the conditions of 120(h) covenant are met. The county plans to develop the area for lower-income or senior housing.

The AC&W Site was placed on the Superfund (CERCLA) List in July 1987 after TCE was detected in groundwater at concentrations ranging up to 790 micrograms per liter (ug/l) in the shallow water bearing zone (SWBZ) monitoring wells. The groundwater contamination was combined with other underground storage tank sites in the general geographic area to form the AC&W OU. Remedial investigations and the remedial action at the AC&W OU have been undertaken as part of the Mather AFB Installation

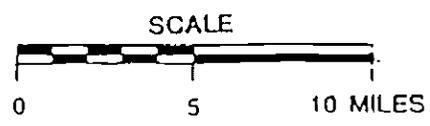
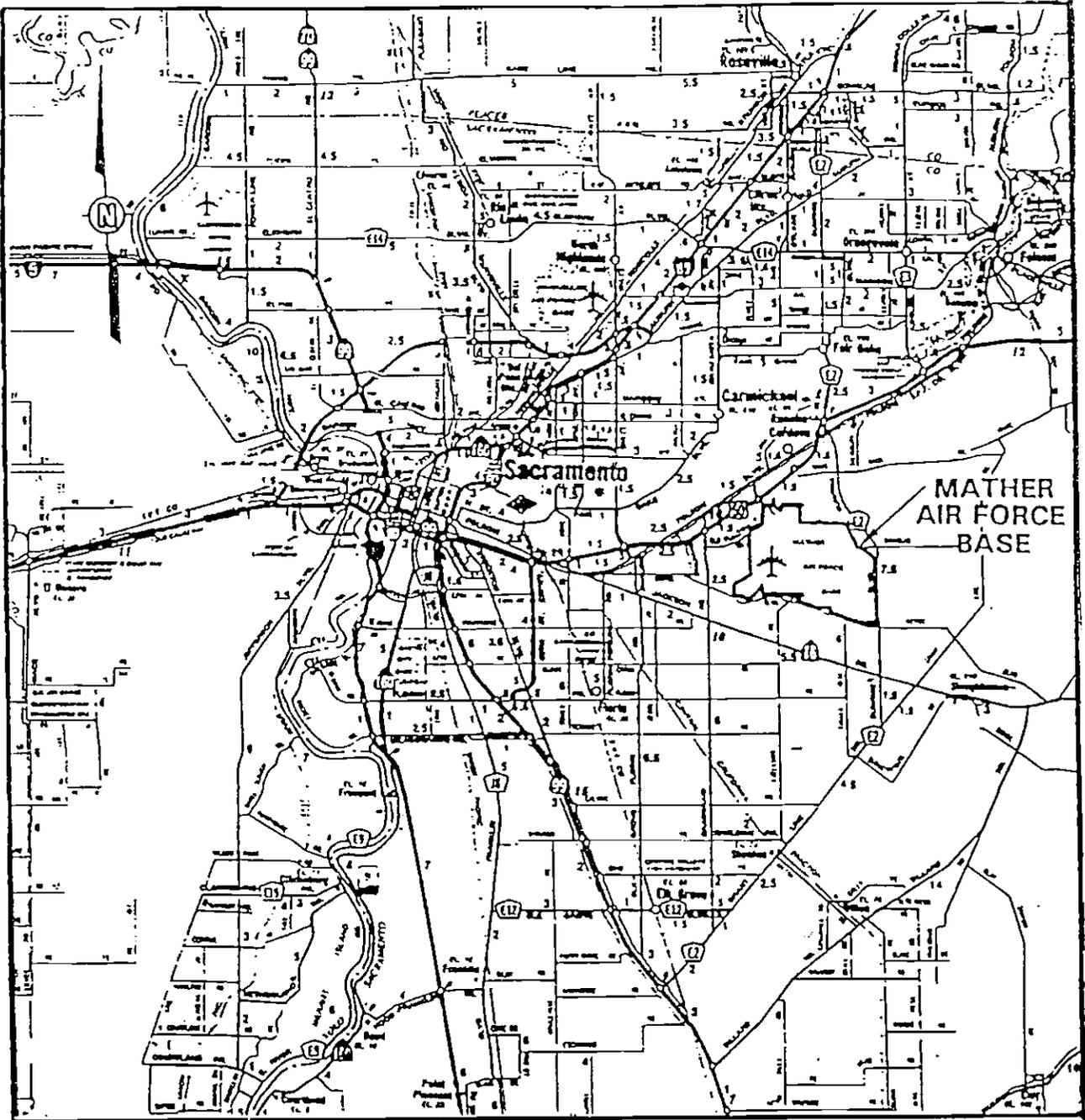


FIGURE 1

- LEGEND**
- ⊕ SHALLOW MONITORING WELL SCREENED AT WATER TABLE
  - ◆ DRY WELL
  - ⊕ BASE WATER SUPPLY WELL
  - ⊙ AC&W WATER SUPPLY WELL (ABANDONED)
  - X SCREENING SAMPLE
  - |— APPROXIMATE TCE PLUME DETECTION LIMIT BOUNDARY
  - (5.7) TCE CONCENTRATION IN 5%  
ND NONE DETECTED

**NOTES**

1) TCE CONCENTRATIONS FOR DRY WELLS WERE FROM THE 5/91 SAMPLING RESULTS. WELLS ARE SCREENED AT THE WATER TABLE.

2) CONTOURS ARE 1, 10, AND 100 PPM TCE

3) A COMPARISON OF DATA FROM 1993 AND 1991 CORROBORATES THE CONTOURS SHOWN

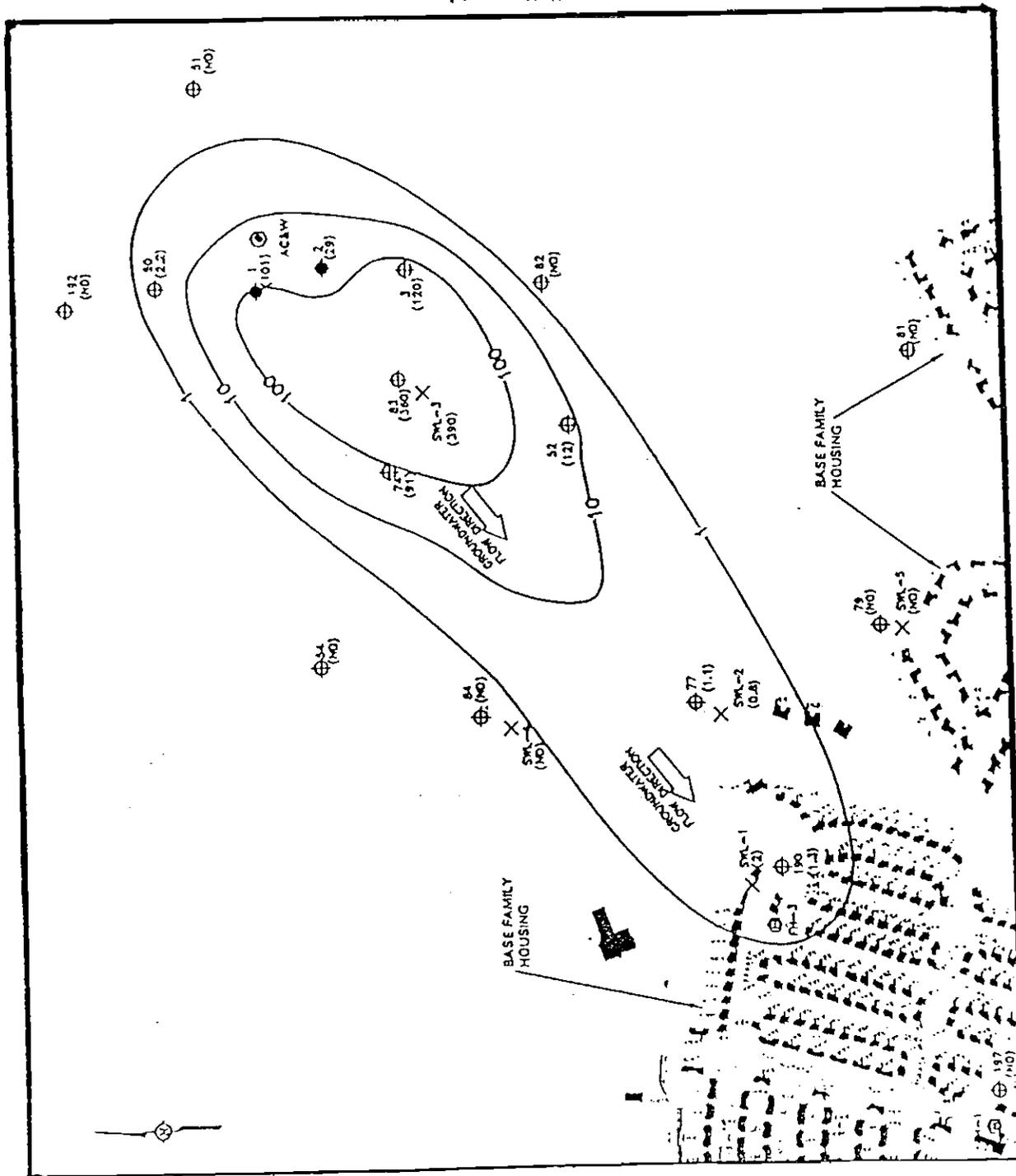
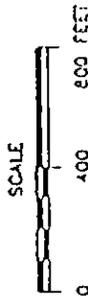


FIGURE 3

Restoration Program (IRP). The AC&W OU ROD was signed by the US Air Force, US EPA, and State of California in January 1994. Prior to when the ROD was prepared, nine separate investigations were conducted at the site and routine groundwater monitoring has been an ongoing activity from 1989. Results of these investigations are reported in:

1. Initial Investigation, Mather AFB Bioenvironmental Engineering Staff, November 1979;
2. IRP Records Search for Mather AFB, Phase I, June 1982 [CH2M-Hill Inc. 1982];
3. IRP Phase II Confirmation/Quantification, Stage 1 Investigation, June 1986 [Weston 1986];
4. IRP Phase II Confirmation/Quantification, Stage 3 Investigation, February 1988 [AeroVironment 1988];
5. IRP Sampling and Analysis Report for Site Monitor Wells, October/November 1988 [IT 1988];
6. IRP Site Inspection Report, August 1990 [IT 1990];
7. IRP Remedial Investigation Report of the AC&W Site, March 1991 [IT 1991a];
8. IRP Quarterly Routine Monitoring Reports, Engineering Science and Technology (EA), and IT Corporation (IT), [EA 1990a; EA 1990b; EA 1990c; IT 1991c; IT 1991d; IT 1992a; IT 1992b; IT 1992c; IT 1992d; IT 1993a; IT 1993b]
9. IRP Feasibility Study for the AC&W Site, August 1991 [IT 1991b]; and
10. Preliminary Design Investigation Report for the AC&W Site, June 1992 [IT 1992e].

Records indicate that from 1958 to 1966 waste solvents were disposed in a pipe in the ground at the AC&W OU. The disposal is assumed to be the cause of TCE contamination in the groundwater. Other releases that have occurred at the AC&W Site include fuel that leaked from underground storage tanks at IRP Sites 25, 30 and 47; however analyses of soil samples indicate that no contamination remains at these sites.

The remedial investigations confirmed the presence of dissolved-phase TCE near the water table in the shallow water bearing zone (SWBZ). Sampling data from Well MAFB-67 indicated that the lesser concentration of TCE extends sporadically into the lower water bearing zone (LWBZ). Figure 3 shows the aerial extent of the TCE plume at the water table based on data from 1991 and 1993. Groundwater flows generally to the southwest at the AC&W OU. The plume originates in the area near the FFA radar dome and extends into the north-east section of the Mather housing area. Significant

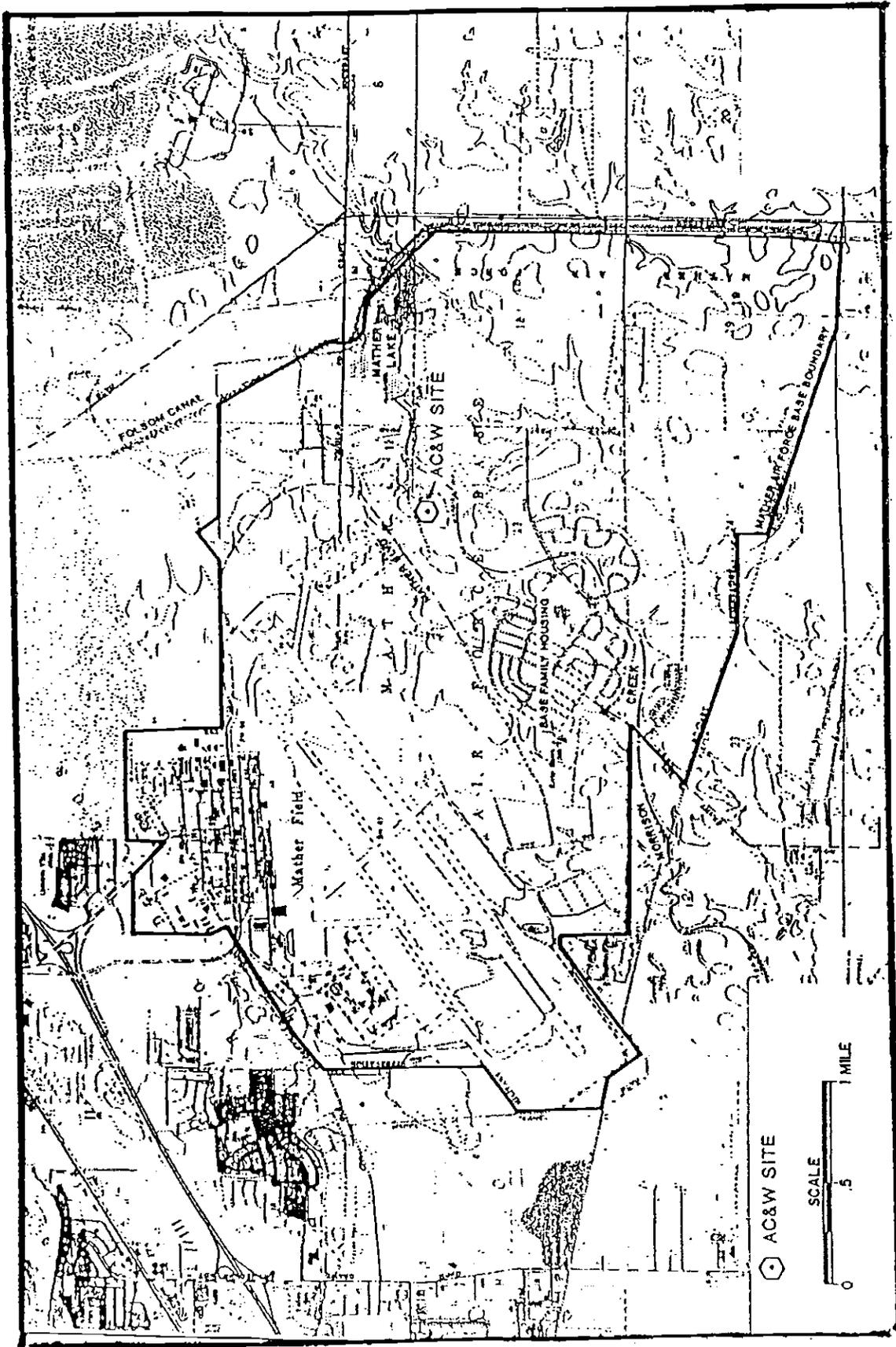


FIGURE 2

contamination was not found in soils - sampled from near the ground surface to the water table. A baseline risk assessment was also performed as part of the remedial investigation activities. The risk assessment determined that the reasonable maximum exposure (RME) to groundwater contamination occurs in a land-use scenario whereby new drinking water wells might be installed in the SWBZ. Under these conditions the RME concentration of TCE would be about 146  $\mu\text{g/l}$  resulting in an excess cancer risk of  $1.1 \times 10^{-5}$ .

## 2.2 Description of the Selected Remedy

The selected remedy addresses the potential threat to human health posed by TCE contamination in groundwater. Although the SWBZ is not presently used at the AC&W OU area, it is a potential source of drinking water. The selected remedy is intended to restore the SWBZ by reducing the TCE to the Safe Drinking Water Act Maximum Contaminant Level (MCL) of 5  $\mu\text{g/l}$ . The AC&W OU ROD selected extraction of contaminated water in the SWBZ, treatment by air stripping, and injection into the SWBZ outside the area of contamination to remedy the contamination in the SWBZ. The remedy is estimated to cost approximately \$8.5 million over a period of ten years including construction capital.

The ROD describes the engineering features of the pump and treat system conceptually, stating that detailed specifications would be developed during the design phase. The design of the pump and treat system determined that a treatment rate of approximately 270 gpm pumped from eight extraction wells would be used to hydraulically capture groundwater contaminant concentrations above 5  $\mu\text{g/l}$  of TCE. The design included eight injection wells to produce favorable hydraulic gradients resulting in faster cleanup and provide an overall acceptable way to discharge the treated effluent. The extraction wells are generally located along the longitudinal axis of the plume; the injection wells bracket the plume laterally and at the downgradient toe of the plume.

The ROD determined that the effluent injected outside of the contaminated plume and into clean groundwater will have a discharge monthly median TCE concentration level no greater than 0.5  $\mu\text{g/l}$ . Injection of the treated groundwater within the contaminated plume will have a monthly median TCE concentration level not exceeding the concentration of TCE in the groundwater at the point of injection. However, in no case will the maximum discharge concentration level exceed 5.0  $\mu\text{g/l}$ , the federal and state MCL. For the array of injection wells constructed at the AC&W OU, which are all outside the plume, the effluent concentration must meet the more stringent standard of 0.5  $\mu\text{g/l}$ .

## 2.3 Public Involvement

The public participation requirements of CERCLA and the NCP were met prior to selection of the remedy in the ROD. Two public comment periods were held; the first from October 1, 1991 through October 31, 1991 and the second from March 16, 1992 through April 15, 1992. The first comment period provided an opportunity for comment

on the Proposed Plan for Groundwater Cleanup at the Aircraft Control and Warning Site. The plan contained alternatives that included reinjecting or disposing the treated groundwater to Mather Lake or the Sanitary Sewer, with discharge to Mather Lake identified as the preferred option. A community meeting was held by the Air Force on October 1, 1991 to discuss the alternatives and provide supporting analysis and information. The meeting also allowed the Air Force to receive verbal and written comment on the plan from the public. The Air Force did not receive any comment from the public on the plan to discharge treated groundwater to Mather Lake.

Based on information obtained after the close of the first public comment period, the Air Force selected reinjection of the treated groundwater as the new preferred alternative. The information obtained dealt largely with potential discharge limitations which had the potential of significantly increasing the remedial action costs. The Air Force held a second public comment period for the Revised Proposed Plan for Groundwater Cleanup at the Aircraft Control and Warning Site which identified reinjection of treated groundwater as the preferred alternative. A community meeting was held April 1, 1992 to present and receive comment on the revised plan.

Following issuance of this ESD, the Air Force will meet the requirements of the NCP by placing it in the AC&W OU Administrative Record, making it available for public review; and publishing a notice in a major local newspaper that briefly summarizes the change in the remedy and the reasons for the difference. The Air Force will also prepare a fact sheet summarizing the ESD. The fact sheet will be sent to those on the Mather Community Relations Plan mailing list and made available at public and Restoration Advisory Board meetings.

### **3. Description of Significant Change to the Selected Remedy**

This ESD changes one portion of the ROD. To the extent that this ESD differs from the ROD, it supersedes it.

The discharge component of the remedy is changed to include discharge of some or all of the treated groundwater to Mather Lake and use of treated water to irrigate Sacramento County park land. A pipeline will be built below ground to transmit the treated groundwater to the lake located on Mather AFB approximately one mile east of the air stripping tower. The AC&W OU ROD identified Substantive National Pollutant Discharge Elimination System (NPDES) requirements as an ARAR for the discharge of treated groundwater to Mather Lake. These requirements are primarily effluent limitations and monitoring requirements that are discussed in Section 3.1 of this document and which are further specified in a monitoring plan which is separate to this ESD and governs the discharge of treated groundwater effluent to Mather Lake. The plan will be in effect until superseded by revision(s) to the AC&W Sampling and Analysis Plan. To implement the remedy selected in the ROD, the Air Force submitted a Remedial

Action Work Plan [EA 1993] and a Preliminary Engineering Report [EA 1994] for regulatory review and comment. Construction of the pump and treat system began in June 1994 and phased start-up was initiated in January 1995. The system has been operating nearly continuously since prove-out of the extraction/air stripping activities concluded on February 3, 1995. The system, as built, includes a groundwater extraction system consisting of eight six-inch-diameter extraction wells. The wells have 60-80 foot screens in the SWBZ to depths of 180-190 feet. Water is pumped from these wells by submersible pumps with 40 gpm capacities. The extraction wells are manifolded to underground pipelines leading to the treatment plant where they come together at the air stripper. The stripping tower is four feet in diameter and the packing is 27 feet deep. Water enters the top of the tower falling down over the packing material. TCE is stripped from the groundwater by air flowing upward through in the tower and the treated groundwater flows into underground storage tank below the treatment pad. Two pumps distribute the treated water from the effluent tank to the eight injection wells. The injection wells are six inches in diameter and 180 feet deep with 80 foot screened intervals in the SWBZ and overlying vadose zone.

Lower than expected injection flow rates were initially observed during an eight-hour injection test conducted during the pump and treat system prove-out phase with performance decreasing over time [EA 1995]. During the prove-out phase, the rate that all injection wells could accept water declined to approximately 180 gpm. Air mixed with (or rather entrained) in the water was believed to be a primary cause of the - injection capacity impairment and modifications to the injection system were made to eliminate sources of injected air. The wells were also redeveloped by pumping and surging during the prove-out period. Since continuous operation began the overall injection rate has decreased to an average of 130 gpm indicating that air entrainment or other problems still persist with the injection system. Redeveloping the injection wells is shown to increase the injection capacity; but the results are temporary and redevelopment is costly.

To address the injection well problem, the Air Force held an AC&W Workshop on August 21 to 25, 1995 which was attended by persons experienced with groundwater pump and treat systems and representatives from regulatory agencies. The purpose of the workshop was to identify feasible solutions to solving system performance problems and identify alternatives that would allow operation of the system at a rate that would achieve plume capture and compliance with the AC&W OU ROD. Significant recommendations in the Summary of the AC&W Workshop [MW 1995] included a series of tests to verify that plume capture would be achieved at the designed flow rate. Also, assuming that capture is achieved at the design rate, discharge of treated groundwater to Mather Lake was identified as a potential alternative for discharge if the treated groundwater could not be injected.

The Air Force conducted several tests in March 1996 per the workshop recommendations which verified that plume capture could be achieved at an extraction rate of 270 gpm. The Air Force concurs with workshop finding that discharge alternatives that included

treated groundwater injection are not preferable given past performance and that discharge to Mather Lake provides certain advantages. The Summary of the AC&W Workshop listed these advantages as allowing sufficient discharge capacity and not creating a new wetland as compared to direct discharge to Morrison Creek drainage. During drought or even normal precipitation years, the lake level lowers considerably in late summer and/or early fall. In the past, the Air Force has purchased water, when available, from the adjacent Folsom South Canal to maintain the lake level to support the fish population. Discharge of treated groundwater would reduce the need to supply Mather Lake with water from less reliable sources during the duration of the groundwater treatment.

The Air Force discussed the acceptability of discharging treated water to Mather Lake with the regulatory agencies over the course of several Base Closure Team (BCT) Meetings and Technical Group Discussions. The Central Valley Regional Water Quality Control Board obtained samples from Mather Lake and determined that water quality of both the lake water and treated groundwater are compatible. The CVRWQCB reported these results in a BCT meeting held in May 1996 and indicated that discharge to Mather Lake appears acceptable.

The cost of constructing the pipeline to Mather Lake is approximately \$300,000. The estimated operation and maintenance cost of the pipeline is not significant other than the cost of electrical power to pump the water the further distance to the lake and additional monitoring of the treated water and the lake. Other options such as increasing the frequency of injection well development have associated costs which over time would likely be greater than the lifetime costs of constructing and operating the pipeline. The path of the pipeline is shown on Figure 4.

Mather Lake was constructed by the Air Force to provide a fishing and a wildlife area for base occupants to use for recreational activities. The lake is approximately 63 acres in area and can hold about 280 acre-feet at its maximum capacity. Drainage into Mather Lake is on the east across the Folsom South Canal on an unnamed tributary of Morrison Creek. Outflow from the lake is via circular culverts in a dam located on the west side of the lake. Lake inflow occurs primarily from storm run-off. The Air Force has a license to divert up to 280 acre-feet per year of flow into the lake.

### **3.1 Compliance with Applicable or Relevant and Appropriate Requirements**

Pumping and treating groundwater requires a disposal option for the treated effluent. Since experience has shown that injection is impracticable, other disposal options such as surface water discharge have become necessary for implementation of the remedial action, with discharge to Mather Lake the preferred alternative (Alternative 4 - Extraction/Treatment with Discharge to Mather Lake or Sewer in the AC&W OU ROD).



There are several requirements governing the discharge to Mather Lake that must now be considered. These requirements are defined in CERCLA as applicable or relevant and appropriate requirements (ARARs) which are identified and discussed within this ESD for the option to discharge treated effluent to Mather Lake. Compliance with these identified ARARs is required by the ESD to perform the clean up of the AC&W OU using discharge of effluent to Mather Lake. ARARs associated with the use of treated groundwater for irrigating park lands are not identified in this ESD. It will be the responsibility of the users of the water to identify and comply with applicable regulations.

There are three categories of ARARs that a remedial action must comply with in addition to being protective of human health and the environment. The categories include chemical-specific requirements that establish numerical standards such as chemical concentrations; action-specific requirements are usually technology- or activity-based requirements or limitations on actions; and location-specific requirements which place restrictions on remedial activities solely because they are in specific locations. Requirements are further categorized as federal or state with the more stringent ARAR being identified in the ESD and put into effect.

#### 3.1.1 Federal and State Chemical-Specific ARARs

There are no chemical-specific federal or state ARARs identified for the Mather Lake discharge option. Numerical standards for the discharge of treated groundwater to Mather Lake are established by action-specific ARARs.

#### 3.1.2 Federal and State Location-Specific ARARs

There are no location-specific federal or state ARARs identified for the Mather Lake discharge option.

#### 3.1.3 Federal and State Action-Specific ARARs

Table 3-1 identifies the federal and state action-specific ARARs.

Table 3-1  
Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARAR
<b>Federal ARARs</b>			
Federal Clean Water Act	40 CFR 122 - USEPA Administered Permit Programs: The National Discharge Elimination System; Subsection 40 CFR 122.44 (d) and (e).	Applicable	Discharges into surface water must achieve federal and state water quality standards (40 CFR 122.44(d).  Discharge limitations must be established at whichever of the technology based or water quality-based standard is more stringent. (40 CFR 122.44(e).
Fish and Wildlife Coordination Act	40 CFR 6.302 (g)	Applicable	Requires Federal agencies involved in actions that will result in the control or structural modification of any natural stream or body of water for any purpose, to take action to protect the fish and wildlife resources which may be affected by the action.
<b>State ARARs</b>			
Fish and Game Code Sections 1600 et seq.		Applicable	Diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake will involve mitigation measures to avoid or minimize impacts on natural resources.
Fish and Game Code Sections 5650 et 5652		Applicable	It is unlawful to deposit in, permit to pass into, or place where it can pass into the water of this state any material listed in Fish and Game Code Section 5650 and 5652.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	Central Valley Regional Water Quality Control Board Basin Plan;	Applicable	Establishes water quality objectives, including narrative and numerical standards, that protect the beneficial uses of surface water in the region. The designated beneficial uses are municipal and domestic; agricultural; and industrial supply.  Specific applicable portions of the Basin Plan include beneficial uses of affected water bodies and water quality objectives to protect those uses.

Table 3-1 (Continued)			
Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs)			
Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARAR
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	State Water Resources Control Board Resolution 88-63	Applicable	<p>Specifies that, with certain exception, all surface waters have beneficial use of municipal or domestic water supply. Applies in determining beneficial uses for waters that may be affected by discharges of waste.</p> <p>SWRCB Resolution 88-63 applies to the discharge of effluent to surface water. The resolution specifies that, with certain exceptions, all surface waters have beneficial use of municipal or domestic water supply. Consequently, California State primary MCLs are relevant and appropriate, however the most stringent federal or state standard will be the ARAR for the remedial action. California standards which may be ARARs are found in 22 CCR 66435, 22 CCR 64444.5, and 22 CCR 64473.</p>

The Federal Clean Water Act regulates discharges to surface water under statute 40 CFR 122 - US EPA Administered Permit Program: National Discharge Elimination System (NPDES). This ARAR requires establishment and compliance with numerical or narrative effluent limitations that achieve federal and state water quality standards including state narrative water quality criteria. Section 121 of CERCLA exempts on-site activities from obtaining permits. However, the substantive requirements of a law or regulation must be met. In particular, on-site discharges to surface waters are exempt from procedural NPDES permit requirements.

State Water Resources Control Board Resolutions 68-16, the water anti-degradation policy, and 88-63, sources of drinking water policy are identified as applicable requirements for the protection of surface water bodies of the state. The Central Valley Regional Water Quality Control Board Basin Plan [CVRWQCB 1995] for Sacramento-San Joaquin Basins designates beneficial uses of water bodies in the area of Mather AFB, and contains chemical specific requirements that would pertain to Mather Lake and the Morrison Creek tributary. The beneficial uses of Mather Lake and Morrison Creek are not designated in the Basin Plan specifically. However as a tributary of the Sacramento River, Morrison Creek is presumed to have the same uses as the river (that is, municipal supply, agricultural, recreational, and aquatic habitat). The Basin Plan requires that the effluent not contain chemical constituents concentrations that adversely affect beneficial uses, and that water designated for use as municipal supply shall not contain

concentrations of chemical constituents in excess of the maximum contaminant levels specified on the California Code of Regulations, Title 22, Division 4, Chapter 15.

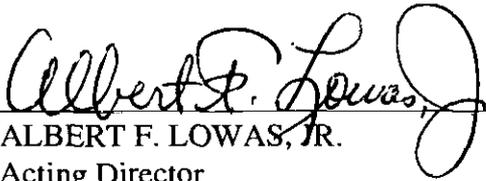
To ensure compliance with all identified ARARs associated with discharge of effluent to Mather Lake the following effluent limitations are established. The numerical limits established on a monthly median and on a daily maximum basis to meet the requirements of Resolution 68-16 are set forth in Table 3.2. Effluent, at the outfall to Mather Lake, shall not exceed these limits. Furthermore, these standards will insure compliance with Resolution 88-63 in meeting federal and state drinking water standards for a potential municipal water supply. The groundwater pump and treat system has been in operation since 1995 and has consistently met the effluent limit of 0.5  $\mu\text{g/l}$  for TCE with the exception of an anomalous sample of 1.9  $\mu\text{g/l}$ . This record of compliance demonstrates that Table 3-2 limits are appropriate technology-based standards for toxic pollutants therefore meeting the requirements of 40 CFR 122.44(e).

Table 3.2  
Mather Lake Discharge Limits

Limits for Discharge to Mather Lake Based on State Board Resolution 68-16 and NPDES Program (concentrations in $\mu\text{g/l}$ )		
Constituent	Monthly Median	Daily Maximum
Total Volatile Organics	0.5 <sup>1</sup>	1.0 <sup>2</sup>
<sup>1</sup> EPA Method 601 or equivalent <sup>2</sup> Combined total of all detections within the test above standard reporting limits		

#### 4.0 Statutory Determinations

Considering the changes made to the selected remedial action within this ESD, the remedy remains protective of human health and the environment and is cost-effective. In addition, the revised remedial action uses permanent solutions and alternative treatment technologies to the maximum extent practical for this site. The change contained herein is significant, but does not fundamentally change the remedy.

  
ALBERT F. LOWAS, JR.

Acting Director  
Air Force Base Conversion Agency

  
Date

## 5.0 Comment and Response

The US EPA, California DTSC, and Central Valley Regional Water Quality Control Board (RWQCB) reviewed the draft ESD and provided comment in the attached correspondence. The DTSC did not contribute comment on the document and a response is not provided; but as the coordinating agency for the State of California the DTSC transmitted RWQCB comments to the Air Force.

### US EPA Comment

The US EPA comments are mostly editorial and apparently made to improve reader understanding and clarify certain points of fact. These comments are addressed in the report by making the suggested change or clarifications. However, one comment is responded to below, as it along with state comment on the same issue produced significant revision to the ESD.

#### Comment:

Comment 9. Page 11, first paragraph: Since the ROD does not spell out what the specific effluent limitations for compliance with NPDES requirements are, the Air Force should list the substantive NPDES requirements in an attachment to this ESD.

#### Response:

An ARARs section is now incorporated in the ESD that identifies the requirements for discharge of effluent to Mather Lake including those associated with NPDES. Also included in that section are effluent limits for discharge to the Lake. The effluent limitations were developed to comply with ARARs and NPDES permit requirements for the discharge of treated groundwater to Mather Lake.

### CVRWQCB Comment

#### Comment:

The CVRWQCB commented that the “discharge of treated water into Mather Lake must comply with NPDES requirements for direct discharge into surface waters” and “that it is necessary to issue a permit since all substantive requirements found in a permit are not currently contained in an approved CERCLA decision document”. Furthermore, the CVRWQCB communicates that “If the Air Force provides a CERCLA decision document (e.g., a ROD Amendment) that has been subject to public comment and response, contains all substantive requirements contained in the NPDES permit, and the issue of on-site discharge is resolved the Boards will consider rescinding the NPDES permit which is currently scheduled for adoption on September 20, 1996”.

Response:

The Air Force does not agree that a NPDES permit is required for the proposed discharge of treated groundwater into Mather Lake. The Air Force position is more fully explained in correspondence from Air Force counsel directed to the State Water resources Control Board from Air Force Regional Counsel Office dated August 7, 1996, and to the CVRWQCB dated September 9, 1996 (attached), and supported by correspondence from US EPA counsel dated September 9, 1996 (attached). Summarizing, the Air Force believes that the discharge of treated groundwater is conducted "on-site" consistent with the intent and point of CERCLA and the NCP and is necessary to the completion of the remedial action for the AC&W OU. Therefore, the Air Force is exempt by law from the requirement to obtain a Federal, State, or local permit for the proposed discharge. However, compliance is required with substantive requirements of the NPDES program which is identified as an ARAR in the Draft Final ESD. The ESD is enforceable under the Mather Federal Facilities Agreement between the Air Force, US EPA, and the State of California.

## 6.0 References

AeroVironment Inc, Monrovia, California (AeroVironment 1988), IRP Phase II Confirmation/Quantification, Stage 3 Investigation, February 1988.

CH2M-Hill Inc., Gainesville, Florida (CH2M-Hill 1982), IRP Records Search for Mather AFB, Phase 1, June 1982.

EA Engineering, Science and Technology, Lafayette, California (EA 1990a), (EA 1990b), and (EA 1990c), Quarterly Groundwater Sampling at Mather AFB, June 1990, August 1990, and November/ December 1990.

EA Engineering, Science and Technology, Lafayette, California (EA 1993), AC&W Remedial Action Workplan, October 1993.

EA Engineering, Science and Technology, Lafayette, California (EA 1994), AC&W Preliminary Engineering Report, September 1994.

EA Engineering, Science and Technology, Lafayette, California (EA 1995), First Quarterly Report for the AC&W Pump and Treat System, April 1995.

International Technologies Corp., Martinez, California (IT 1988), IRP Sampling and Analysis for Site Monitor Wells, October/ November 1988.

International Technologies Corp., Martinez, California (IT 1990), IRP Site Inspection Report, August 1990.

International Technologies Corp., Martinez, California (IT 1991a), IRP Remedial Investigation Report, March 1991.

International Technologies Corp., Martinez, California (IT 1991b), IRP Feasibility Study, August 1991.

International Technologies Corp., Martinez, California (IT 1991c), (IT 1991d), (IT1992a), (IT 1992b), (IT 1992c), (IT 1992d), (IT 1993a), (IT 1993b), IRP Quarterly Routine Groundwater Monitoring Reports, June 1991, September 1991, January 1992, June 1992, August 1992, November 1992, February 1993, and August 1993.

International Technologies Corp., Martinez, California (IT 1992e), Preliminary Design Investigation, June 1992.

Montgomery Watson, Davis, California (MW 1995), Summary of AC&W Workshop August 21 to 25, 1995, November 1995.

Roy F. Weston Inc, West Chester, Pennsylvania (Weston, 1986), IRP Phase II Confirmation/Quantification, Stage 1, Investigation Report, June 1986.

US Air Force (US Air Force, 1993), Record of Decision: Aircraft Control and Warning Site, October 1993.

US Air Force (US Air Force, 1989), Federal Facility Agreement, July 21, 1989.

US EPA, (EPA, 1991), Guide to Addressing Pre-ROD and Post-ROD Changes, April 1991.

## **7.0 Attachments**

1. US Air Force letter to CVRWQCB, regarding Comments to Issuance of Draft NPDES Permit, September 9, 1996.
2. US EPA letter to CVRWQCB, regarding Proposed NPDES Permit, September 9, 1996.
3. US EPA Letter Comment to Air Force on Draft ESD, August 29, 1996.
4. CVRWQCB Letter Comment to Air Force on Draft ESD, August 22, 1996.
5. DTSC Letter Comment to Air Force on Draft ESD, August 22, 1996.
6. US Air Force letter to Mr Philip Wyels, State Water Resources Control Board, regarding Requirement for a NPDES Permit for Discharge to Mather Lake; August 7, 1996.

7. California Regional Water Quality Control Board letter to Air Force regarding Transmittal of Final Explanation of Significant Difference (ESD) to the AC&W OU record of Decision - Discharge of Treated Groundwater to Mather Lake, Mather Field Formerly Mather Air Force Base (MAFB), Sacramento County, May 9, 1997.



DEPARTMENT OF THE AIR FORCE  
AIR FORCE LEGAL SERVICES AGENCY (AFLSA)  
REGIONAL COUNSEL, WESTERN REGION (JACE-WR)  
333 MARKET STREET, 6TH FLOOR  
SAN FRANCISCO, CALIFORNIA 94105-2195

9 September 1996

MEMORANDUM FOR CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL  
BOARD  
3443 Routier Road, Suite A  
Sacramento, CA 95827-3098

FROM: AIR FORCE REGIONAL COUNSEL - WESTERN REGION

SUBJECT: Comments to issuance of Draft National Pollution Discharge Elimination System (NPDES) permits for Mather, Castle and McClellan Air Force Bases (AFBs)

1. Thank you for the opportunity to respond to the tentative NPDES permits issued for Mather, Castle, and McClellan AFBs. The United States Air Force (USAF) believes that each of these permits circumvent the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund Law at 42 USC 9601), the National Contingency Plan (NCP at 40 CFR 300.400), the Sacramento River and San Joaquin River Basin Plan (IV - 12.00), and three separate interagency agreements (IAGs) signed by the Department of Toxic Substances Control (DTSC) and which are all binding on your agency. This memorandum will briefly set out our position.
2. Congress' intent in passing CERCLA was to keep lead agencies from having to comply with administrative permit requirements that would interfere with its expeditious cleanup of contaminated sites. Instead, CERCLA mandates that agencies in charge of cleanups incorporate and follow all substantive requirements at the federal, state, and local level. This is accomplished through an admittedly difficult process of determining applicable or relevant and appropriate requirements (ARARs). Both the NCP and the three relevant IAGs obligate your agency to provide us, the lead agent in each of these cases, with ARARs at specific times during the process. This requirement to provide ARARs is funded in large part by the Defense, State Memorandum of Agreement (DSMOA) which accounts for a significant portion of your agency's budget.
3. Although each case is different, each of these tentative permits violates CERCLA in its own way. A brief explanation of each is in order.
  - a. McClellan: Although McClellan AFB was issued a NPDES permit in 1987 for this groundwater treatment plant, the installation has maintained since 1991 that the site functions completely under CERCLA and is therefore exempt from permit requirements. Your agency's position appears to be that certain substantive requirements are missing from CERCLA decision documents for the site. This is surprising because your agency has always been involved in the CERCLA process and agreed (through DTSC) to an interim record of decision for the site in 1995.

Atch 1

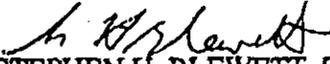
b. Castle: The subject stormwater permit at the former Castle AFB is really two permits in one. One is a stormwater permit which is arguably necessary for the civilian airport now operated on the site. The other is a NPDES permit for a groundwater treatment plant (CERCLA site) on the base. We believe all references to Extraction Well 3 (EW3) in the permit are unenforceable and contrary to law for the reasons stated above. Our disagreement with the effluent limitation for dioxin in the stormwater permit is related to CERCLA in a more subtle way. A recently revised draft of the Castle permit does not include any reference to an effluent limitation. We are hopeful that we can come to a consensus with your staff on this issue prior to your meeting. We still ask that references to EW3 be removed.

c. Mather: Mather AFB signed an IAG in 1989 similar to those signed for Castle and McClellan. It signed a Record of Decision with USEPA and DTSC in 1993 to operate a groundwater treatment facility. Following some technical difficulties, Mather submitted an Explanation of Significant Difference (ESD) - a CERCLA document - on 31 Jul 96. The ESD proposes to discharge all or some portion of the treated groundwater to a nearby lake rather than reinject it. The staff, without proposing any substantive changes to the ESD, issued the tentative permit as the "most convenient" way to incorporate substantive requirements into the process. As stated above, we vehemently object to such an analysis. The legal issue in this case is whether the new proposed discharge meets the definition of "on-site" in CERCLA. This issue is addressed in a 7 Aug 1996 memorandum to Mr. Philip Wycels which is attached. We would like to further point out in this regard that the project managers at Mather are in complete agreement on this location and that this site has long been discussed as an alternative and has had public comment.

4. Neither the Air Force nor the USEPA have ever wavered in our refusal to comply with any state or local permit or permit equivalency process for our on-site superfund cleanups. The tentative permits violate the letter and spirit of CERCLA, our IAGs, your own basin plan, and numerous decision documents which we have jointly developed during this long process. You will almost certainly hear a number of legal arguments during this process. I urge you to consider separate correspondence from USEPA, McClellan, and Castle but I urge that you review the Interagency Agreements in particular before you make a decision.

5. Conclusion: We ask the board to order the tentative permits withdrawn and to encourage the staff to work with the Air Force and the USEPA to resolve any substantive disagreements in cleanup requirements at each of the sites. Should the permits be issued, the Air Force will have little choice but to consider them unenforceable. Such an outcome will no doubt lead to formal, high level dispute resolution. This outcome will not help further our ultimate goal of protecting the environment and complying with the law.

6. Should you have any questions, please contact myself or Capt Eric Bee at (415) 977-8840/8848.

  
STEPHEN H. BLEWETT, Lt Col, USAF  
Regional Counsel

Attachment  
Memorandum dtd 7 Aug 96



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

BY FAX

September 9, 1996

California Regional Water Quality Control Board  
Central Valley Region  
3343 Routier Road  
Sacramento, California 95827-3098

Re: Proposed NPDES Permits for Mather, Castle and McClellan  
Air Force Bases (AFBs)

Thank you for providing EPA with an opportunity to comment on the proposal by the Central Valley Region of the Regional Water Quality Control Board ("Water Board") to require NPDES permits for Mather, Castle and McClellan AFBs. EPA would like to provide the following comments and recommendations on these proposed permits.

CERCLA response actions are exempted by law from the requirement to obtain Federal, State or local permit related to activities conducted completely on-site. 42 U.S.C. Section 9621(e)(1), 40 C.F.R. Section 300.400(e)(1). As noted in the NCP, the statute "reflect[s] Congress' judgment that CERCLA actions should not be delayed by time-consuming and duplicative requirements such as permitting... to achieve expeditious cleanups, and reflects an understanding of the uniqueness of the CERCLA program which impacts more than one medium (and thus overlaps with a number of other regulatory and statutory programs.)" However, the permit exemption under CERCLA does not remove the requirement to meet (or waive under appropriate circumstances) the substantive provisions of permitting regulations that are applicable or relevant and appropriate requirements (ARARs) to the CERCLA response action.

The Air Force has indicated that it will comply with all substantive requirements that would apply to the discharges of treated water from Mather, Castle, and McClellan AFBs but it does not believe these activities, which it contends are on-site response actions, require NPDES permits. EPA concurs with the Air Force's position. The proposed discharges of treated water at Mather, Castle, and McClellan AFB, as described below, are on-site response actions within the meaning of CERCLA section 121(e)(1) and the NCP 40 CFR section 300.400(e)(1) which are exempt from having to obtain Federal, State and local permits, including NPDES permits. Of equal importance, EPA is confident

Atch 2

that sufficient site management and oversight controls are in place at these bases to ensure the same public health and environmental protection provided by NPDES permits.

The NCP, 40 CFR 300.400(e)(1), defines on-site as "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." Thus, in order to meet the definition of on-site response actions, the action must meet two criteria: 1) it must be in a suitable area in very close proximity to the contamination and 2) it must be necessary for implementation of the response action. As discussed below, the activities at Mather, Castle, and McClellan AFB meet both of these criteria.

1. With regard to the Mather AFB NPDES permit:

The Water Board is requiring an NPDES permit for the discharge of treated groundwater from the groundwater treatment system at the Aircraft Control and Warning Site (AC&W) Operable Unit into Mather Lake located in Mather Air Force Base. This discharge into Mather Lake is a change from the Record of Decision for the AC&W Operable Unit which states that the treated water will be discharged into injection wells at the site. The injection wells are not meeting the disposal needs of the treatment facility, resulting in the treatment system not operating at full capacity. Therefore, the remedy is not fully effective.

The Air Force is proposing to supplement the current discharge option by diverting some of the treated water from the Groundwater Treatment System into a pipe to Mather Lake, which is approximately one half mile from the treatment system. EPA and, we believe, the State of California support this change to the discharge option as necessary to the implementation of the remedy at the AC&W Operable Unit. The proposed change was documented in a draft Explanation of Significant Difference (ESD) which the Air Force issued in August of this year. The State and EPA commented on the draft ESD and the Air Force will be incorporating the suggestions made by the State and EPA in the final ESD.

The activity at Mather AFB is entitled to the on-site permit exemption for two reasons: first, Mather Lake is a "suitable area in very close proximity to the contamination." The Water Board has indicated that it does not believe that discharge to Mather Lake is a suitable area in close proximity to the contamination for the following reason: Mather Lake is approximately one half mile away from the groundwater treatment system. There is a dry creek bed (Morrison Creek) that lies directly adjacent to the treatment system which, arguably, may be more suitable for receiving the treated water. However, discharge to this creek would not be a good discharge option since it will basically change the ecology of the area during the dry season. In contrast, discharge to Mather Lake would be beneficial since during the dry season, the Air Force currently has to purchase water to augment the flows in the lake. Second,

the discharge to Mather Lake is "necessary for implementation of the response action." As the proposed Water Board NPDES permit for Mather AFB points out, "the injection wells have been progressively plugging and no longer meet the disposal needs of the treatment facility." It is therefore necessary to supplement the reinjection discharge option so that the groundwater treatment system at the AC&W Operable Unit can operate optimally and groundwater cleanup can occur at the scheduled rate and time period. Discharge to Mather Lake would supplement reinjection.

2. With regard to the Castle AFB NPDES permit:

The Water Board is requiring an NPDES stormwater permit for the discharge of treated wastewater from the groundwater extraction and treatment system (EW-3) at Operable Unit 1 into the West Base Drain. The West Base Drain is part of the storm drain system in Castle Air Force Base.

The proposed NPDES permit for Castle AFB states that a permit is required since the treated groundwater from the treatment system at Operable Unit 1 will be discharged into a regulated storm drain system where it will commingle with stormwater runoff and discharge to Canal Creek, a water of the United States.

It is EPA's understanding that the Water Board does not dispute that the storm drain to which the treated water will be discharged is a suitable area in close proximity to the contamination and that discharge of the treated water into the storm drain is necessary for implementation of the response action at Operable Unit 1. Rather, the Water Board asserts that an NPDES permit is required because the discharge into the storm drain will eventually discharge into Canal Creek, a water of the United States, which is offsite. A recent decision by EPA Administrator Carol Browner (In the Matter of the Former Weldon Spring Ordnance Works, Weldon Spring, Missouri) is instructive on this point. The Missouri decision reiterates the Agency's position that a broad interpretation of "on-site" is necessary to best serve the purpose of CERCLA section 121(e)(1), i.e., to avoid redundant procedural permitting steps that could delay cleanup. In the Missouri case, while not disputing that the response actions at issue (incinerator, contaminated wastewater treatment, storm water runoff) were to be constructed entirely within the geographical area considered the NPL site, the State of Missouri contended that because off-site releases will occur, the state may seek to require the Army to obtain permits for these activities. In her decision affirming that permits were not required for these activities, Administrator Browner cited the preamble to the 1988 NCP, where EPA stated that

"on-site further includes situations where the remedial activity occurs entirely on-site but the effect of such activity cannot be entirely limited to the site. For example, a direct discharge of CERCLA wastewater would be an

on-site activity if the receiving water body is in the area of contamination or is in very close proximity to the site, even if the water flows off-site."

Thus, the discharge of treated water into a storm drain at Castle AFB is a discharge into "a suitable area in close proximity to the contamination necessary for implementation of the response action," even if the water flows off Castle AFB into Canal Creek.

3. With regard to the McClellan AFB NPDES permit:  
The Water Board is requiring an NPDES permit for the discharge of treated groundwater from the groundwater treatment system at the Groundwater Operable Unit into Magpie Creek at McClellan AFB.

While not objecting to the discharge to Magpie Creek as necessary to the implementation of the response action, as evidenced by the State of California's concurrence on the selected remedy for this Operable Unit documented in the Interim Record of Decision, the Water Board contends that Magpie Creek is not in close proximity to the area of contamination. EPA recognizes that the inquiry into whether a site is "a suitable area in close proximity to the area of contamination" is necessarily a subjective one. However, EPA's broad application of the on-site permit exemption is consistent with the overall goal of the Superfund program. This was recognized by the court in Ohio v. U.S. EPA, 997 F.2d 1520, 1549 (D.C. Cir. 1993), where the court concludes that the NCP definition "allows EPA to respond to releases expeditiously.... [and] reflects the practical aspects of responding to hazardous waste releases under various conditions....[where] it may be prohibitively burdensome or, in fact, impossible to conduct necessary response measures within narrowly 'contaminated' area." Magpie Creek is directly above the areal extent of the contamination within the base and accordingly, it is EPA's position that the discharge to Magpie Creek at McClellan AFB is an on-site activity that does not require an NPDES permit.

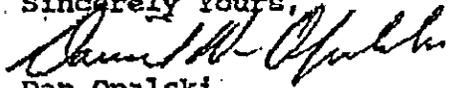
It is our understanding that the legal staff of the Water Board bases its position that the activities at these Air Force Bases are subject to NPDES permits on two grounds: one, that the actions at these facilities are not on-site activities but are offsite activities; and two, that even assuming these are on-site activities, the Tenth Circuit Court of Appeals decision in U.S. v. Colorado (which found that there was independent enforcement of a state law at a CERCLA site) allows the Water Board to require State permits despite the clear and specific language of CERCLA section 121(e)(1). EPA has already explained above that why it believes these are on-site activities that are entitled to the CERCLA permit exemption. As to the U.S. v. Colorado decision, the United States believes this decision was wrongly decided and it has not acquiesced to the Tenth Circuit Court of Appeal decision outside the Tenth Circuit. Lastly, as

noted in the 1995 decision of the Administrator in the Weldon case cited above, "U.S. v. Colorado addresses only enforcement of state law outside the CERCLA process. It does not address the meaning of 'on-site' under CERCLA section 121(e)(1) and what permits are required under CERCLA."

Finally, the State of California, EPA, and the Air Force entered into three-party agreements (Federal Facility Agreements) that govern the cleanup of these three bases. If now or any time in the future the Water Board does not agree with the Air Force's or EPA's position on these matters or on any matter pertaining to the response actions at these facilities, the State of California has committed to a dispute resolution process in these FFAs. EPA believes the FFA dispute process is the appropriate forum for resolving these matters, not the Water Board hearing. Furthermore, as stated above, EPA is confident that the FFAs offer the same public health and environmental protections that would be provided by NPDES permits.

We encourage further discussion of this matter among the FFA parties under CERCLA Section 120. My staff and I are available for discussions.

Sincerely Yours,



Dan Opalski  
Chief,  
Federal Facilities Branch



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street  
San Francisco, CA 94105-3901Anthony Wong  
BRAC Environmental Coordinator  
Air Force Base Conversion Agency  
10503 Armstrong Way  
Mather CA 95655

August 29, 1996

Dear Mr. Wong,

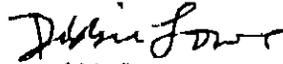
BPA has reviewed the Draft Explanation of Significant Difference for the AC&W OU, dated July 31, 1996. The following comments are provided:

1. p.1: first paragraph, last sentence: change "[T]he content of this ESD is based ..." to "This ESD follows the recommendations ...."
2. p.2, third paragraph: change the sentence beginning with "[T]he Air Force plans to convey the park area to the county when... and the CERCLA 120(h) covenant has been made." to "... and the CERCLA 120(h) covenant can be made. Also, in the same paragraph, the second to the last sentence, change "...after the CERCLA 120 (h) covenant is given." to " after the conditions for the 120(h) covenant have been met."
3. p.5, second to the last paragraph: last sentence refers to IRP Sites 25, 30 and 47 being "closed in the ROD." Please explain this term. Does this mean that they are no further action sites?
4. p. 7, second paragraph: third line from the end of the paragraph, change "provided" to "provide."
5. p.7, second to the last line on this page: change sentence "The discharge portion of the remedy is changed from injection of treated groundwater..." by adding the word "only" after groundwater.
6. p.8, second and third paragraph: refer to "prove-out activities." Also, in the third paragraph, it refers to "air entrained" or "entrainment." Please explain these terms so that the public will be able to understand.
7. p.9, second paragraph: beginning with the sentence "The Air Force accepted recommendations that discharge alternative...." This section is confusing needs to be edited.
8. p.9, last sentence: refers to the "amount needed to offset evaporation and seepage losses." Please explain.

9. p.11, first paragraph: delete that second to the last sentence which begins with "US EPA National Water Quality Criteria..." In addition, since the ROD does not spell out what the specific effluent limitations for compliance with NPDES requirements are, the Air Force should list the substantive NPDES requirements in an attachment to this ESD.
10. p.11, last paragraph: change the phrase "complies with federal and state requirements that were identified in the ROD as applicable ...." complies with federal and state requirements that are identified as applicable...."

If you have questions about any of these comments, please feel free to call me at (415) 744-2206.

Sincerely,



Debbie Lowe  
Remedial Project Manager

cc: Kent Strong, DTSC  
James Taylor, RWQCB  
Bill Hughes, OpTech

STATE OF CALIFORNIA - Environmental Protection Agency

PETE WILSON, Governor

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

 1445 Roulter Road, Suite A  
 Sacramento, CA 95827-3008  
 PHONE: (916) 255-3000  
 DeD FAX: (916) 255-3052


22 August 1996

 Mr. Kent Strong  
 Department of Toxic Substances Control  
 10151 Croydon Way, Suite 3  
 Sacramento, CA 95827

***DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCE FOR THE AIRCRAFT CONTROL  
AND WARNING OPERABLE UNIT, MATHER AIR FORCE BASE (MAFB), SACRAMENTO  
COUNTY***

We have reviewed the Draft Explanation of Significant Difference (ESD) for the Aircraft Control and Warning (AC&W) Operable Unit (OU) for MAFB submitted on 31 July 1996. The purpose of the ESD for the AC&W OU is to modify the existing AC&W Record of Decision (ROD) dated December 1993. The subject ESD addresses a change in the discharge point, from reinjection of treated ground water from the AC&W treatment system, to the discharge of treated ground water into Mather Lake. The new discharge into surface waters (Mather Lake) is subject to provisions of the Federal Clean Water Act administered by the California Regional Water Quality Control Boards.

Discharge of treated water into Mather Lake must comply with National Pollutant Discharge Elimination System (NPDES) requirements for direct discharges into surface waters. A Tentative NPDES Permit for Department of the Air Force MAFB AC&W Ground Water Treatment System, Sacramento County, dated 9 August 1996, has been issued for a 30 day public comment period, and will be considered for adoption at the Regional Board meeting to be held on 20 September 1996. The Draft ESD does not include substantive NPDES requirements for this new discharge to Mather Lake. Since the Board has issued tentative NPDES requirements for this discharge, the Draft ESD must be revised to reference this permit.

We have determined that it is necessary to issue a permit since all substantive requirements found in a permit are not currently contained in an approved CERCLA decision document. In addition, we believe that adoption of the permit is the most efficient and comprehensive manner in which to establish substantive requirements for this discharge. By going through the permit process all interested regulatory agencies and the public will have the opportunity to provide input into the permit. Thus, the process will provide the Air Force with a single document that will specify the conditions under which the discharge is allowed to occur.

If the Air Force provides a CERCLA decision document (e.g., a ROD Amendment) that has been subject to public comment and response, contains all substantive requirements contained in the NPDES

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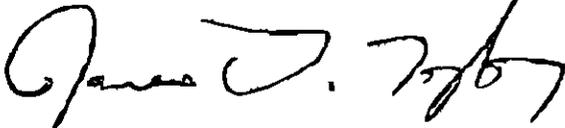
Draft AC&W ESD  
Mather AFB

-2-

22 August 1996

permit, and the issue of on-site vs. off-site discharge is resolved (we believe the discharge is off-site), the Board will consider rescinding the NPDES permit which is currently scheduled for adoption on 20 September 1996. Until a CERCLA decision document is submitted and approved and the on-site vs. off-site issue is resolved, however, the NPDES permit will remain in place.

This issue will be discussed further in a forthcoming memorandum from the State Water Board's Office of the Chief Counsel. We look forward to meeting with all of the parties to discuss this issue further. If you have any questions, please call me at (916) 255-3069.



JAMES D. TAYLOR  
Associate Engineering Geologist

JDT:jt



CalEPA

August 22, 1996

Department of  
Toxic Substances  
Control

Peta Wilson  
Governor

10151 Croydon Way  
Suite 3  
Sacramento, CA  
95827-2106

Mr. Tony Wong  
Base Realignment and Closure Environmental Coordinator  
AFBCA/OL-D  
10503 Armstrong  
Mather, California 95655-1101

James M. Strock  
Secretary for  
Environmental  
Protection

DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCE FOR THE  
AIRCRAFT CONTROL AND WARNING OPERABLE UNIT, MATHER

Dear Mr. Wong:

The State of California has reviewed the subject document dated July 31, 1996. The Department of Toxic Substances Control does not have any comments. Please find enclosed comments by the Central Valley Regional Water Quality Control Board.

If you have any questions, please call me at (916) 255-3705.

Sincerely,

Kent Strong  
Remedial Project Manager  
Office of Military Facilities

Enclosure

cc: Ms. Debbie Lowe  
United States Environmental Protection Agency  
75 Hawthorne Street, H-9-1  
San Francisco, California 94105-3901

Atch 5



Printed on Recycled Paper

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**DEPARTMENT OF THE AIR FORCE**  
**AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE)**  
**WESTERN REGIONAL ENVIRONMENTAL OFFICE**  
**630 BANSOME STREET, SUITE 1336**  
**SAN FRANCISCO, CALIFORNIA 94111-2378**

August 7, 1996

**MEMORANDUM FOR MR. PHILIP G. WYELS**

**State Water Resources Control Board**  
**901 P Street**  
**Sacramento CA, 95814**  
**(FAX) (916) 859-0428**

**FROM: Captain Eric Bee**  
**Deputy Regional Counsel**

**SUBJECT: Whether National Pollution Discharge Elimination System (NPDES) permit required for Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) discharge to Mather Lake.**

1. Facta: Mather AFB, CA currently has a signed Record of Decision (ROD) in place to clean up a TCE plume with an air stripping pump and treat system. The scheme set out is to reinject the treated water once the TCE has been removed. Unfortunately, the reinjection has only allowed the system to operate at approximately one-half capacity. The Air Force as lead agent proposes to divert the treated water by constructing a pipe to Mather Lake which lies approximately one-half mile from the site. It should be noted that a dry creek bed lies directly adjacent to the pump and treat system but it is a poor candidate for discharge because this would artificially change the ecology of this area during the dry season.

2. Legal Analysis: CERCLA § 121(e)(1) provides that "no Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with section 121." (emphasis added). The 1990 National Contingency Plan (NCP); 40 CFR 300.400(e)(1) defines onsite as "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." (emphasis added).

a. The EPA has also set out to define "onsite" in various directives and policy statements. OSWER directive 9355.7-03 dated February 19, 1992 cites the NCP, CERCLA, SARA, and EPA rule making in the federal register for the proposition that neither permits nor a permit "equivalency" process is required for "on-site"

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remediations. The directive explains that EPA policy recognizes that "on-site remedial actions may involve limited areas of noncontaminated land; for instance, an on-site treatment plant may need to be located above the plume or simply outside of the waste area itself."

b. A memorandum from the EPA administrator, Carol Browner, dated November 1, 1995 goes further in resolving a dispute between Missouri and a Federal Facility lead agent. Though not directly on point because it involved the migration of discharge from on-site to offsite, the analysis is helpful in defining "on-site." Ms. Browner puts forth an example from the preamble to the final NCP (55 FR 8666 at 8689) of an incinerator built on upland as a remedy for contamination in a lowland marshy area. She further notes that although the court in Ohio v. U.S. EPA, 997 F.2d 1520 at 1549 (D.C. Cir. 1993) was not enamored with the NCP's definition of on-site, it could not find fault with the minimum discretion it gave to the EPA as lead agent in a CERCLA cleanup to remediate within the spirit of CERCLA § 121 (e)(1).

c. In U.S. v. Ohio, the court found that the NCP definition of "entirely onsite" does not allow EPA to expand the permit exemption of §121(e)(1) beyond its intended scope. The court first noted that the term was not defined in the statute before turning to the NCP definition. The court found that the states' legalistic, formalistic proposed definition of "onsite" which confined the term to "the continuous contaminated area having the same legal ownership as the actual site of the original disposal," created exactly the type of "artificial constraints that the statute meant to reject." U.S. v. Ohio. The court acknowledges that the definition is ambiguous but concludes as follows:

The NCP definition allows EPA to respond to releases expeditiously and, one would hope, efficaciously. It is a definition that reflects the practical aspects of responding to hazardous waste releases under various conditions. For instance, in many situations, it may be prohibitively burdensome or, in fact, impossible to conduct necessary response measures within a narrowly "contaminated" area. See 53 Fed. Reg. 51,406-07 (1988) (flexibility needed to respond to a contaminated plume of ground water extending far beyond the area of contaminated soil); 55 Fed. Reg. 8689-90 (1990) (impossible to locate an incinerator in a contaminated lowland marsh). Nonetheless, the necessary response measures may so closely relate to the concerned site as to be effectively managed under the aegis of CERCLA.

3. Conclusion: The lack of court decisions on point and the well settled EPA policy on this point weigh clearly in Mather's favor in this case. Mather should comply with all substantive requirements under CERCLA and should accomplish an Explanation of Significant Differences (ESD) for the changed discharge but should

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not be required to acquire a NPDES permit. I can be reached at (415) 705-1670 or abee@afcee1.brooks.af.mil should you have questions or comments.



ARLEN ERIC BEE, Capt, USAF  
Deputy Regional Counsel

cc:

Mr. Rod Whitten

Mr. Brent Evans

Ms. Tholma Estrada

STATE OF CALIFORNIA - Environmental Protection Agency

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

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9 May 1997

Mr. Anthony Wong  
AFBCA/DBM  
10503 Armstrong Avenue  
Mather, CA 95665

Post-it* Fax Note	7671	Date	# of pages
To	Frank Duncan	From	M. K. Johnson
Co./Dept	AFBCA	Co.	Mather
Phone #		Phone #	
Fax #		Fax #	

**TRANSMITTAL OF FINAL EXPLANATION OF SIGNIFICANT DIFFERENCE (ESD) TO THE AC&WOU RECORD OF DECISION - DISCHARGE OF TREATED GROUNDWATER TO MATHER LAKE, MATHER FIELD FORMERLY MATHER AIR FORCE BASE (MAFB), SACRAMENTO COUNTY**

We have reviewed the above referenced document submitted 9 April 1997. As stated in our 21 October 1996 comments on the Draft Final ESD, as long as the ESD does not recognize NPDES Permit No. 96-258, the State can not sign the ESD.

The ESD does make reference to compliance with the substantive portions of the NPDES program. We understand from discussions with the Air Force that it intends to comply with the substance of the permit except for the frequency of effluent monitoring and bioassay testing. The frequency of monitoring proposed by the Air Force after six months of operation deviates from the permit. We plan to further discuss this issue as monitoring results are available and may choose to enforce those provisions of the permit if necessary. Therefore, we do not object to the Air Force finalizing the ESD and we do not plan to file a dispute. If our understanding is incorrect, please advise us immediately. This letter has been coordinated with the Department of Toxic Substances Control.

If you have any questions, please call me at (916) 255-3069.

*for*   
JAMES D. TAYLOR  
Associate Engineering Geologist

cc: Ms. Kathleen Salyer, Environmental Protection Agency, Region 9, (H-9-1), San Francisco  
Mr. Kent Strong, Department of Toxic Substances Control, Region 1, Sacramento

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